Ikôn™ Rugged PDA
(Windows Mobile 6.1)
Classic & Professional)

April 16, 2009   **Part No. 8100181.B**

ISO 9001 Certified
Quality Management System

PSION TEKLOGIX

This manual supports the following Ikôn models:

7505-BT

7505-BTSDCM

7505-BTMC75

7505-BTHC25

7505-BTSDCMMC75

7505-BTSDCMHC25

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1 INTRODUCTION

1.1   About This Manual

This manual describes how to configure, operate and maintain the Ikôn Rugged PDA (Model Number 7505).

Chapter 1: Introduction

provides a basic overview of the Ikôn Rugged PDA.

Chapter 2: Basic Checkout

describes the steps required to get the Ikôn ready for operation

Chapter 3: Get To Know The Ikôn

describes the features and outlines how to charge and maintain the battery. This chapter also provides information about indicators, microSD and SIM card installation along with general Ikôn maintenance.

Chapter 4: Working With Windows Mobile 6.1

describes the Microsoft® Windows Mobile 6.1 Today screen and how to use it. This chapter also outlines basics like moving around a window, displaying menus, and so on.

Chapter 5: Programs

provides a description of the Windows Mobile 6.1 Programs options and how to use them.

Chapter 6: Settings

provides details about Windows Mobile 6.1 Settings options and how to use them.

Chapter 7: Peripheral Devices & Accessories

describes the peripherals and accessories available for your Ikôn.

Chapter 8: Specifications

details radio, Ikôn, scanner and battery specifications.

Appendix A: Summit Client Utility (SCU)

provides details about the Summit Client Utility (SCU) screens.

Appendix B: Port Pinouts

describes port pinouts.

Appendix C: Teklogix Imagers Applet

describes the Teklogix Imagers applet and outlines how to use it.

> ***Appendix D: Bar Codes Settings***
> describes the bar codes supported by the Decoded scanners and the Imager supported by Ikôn.

1.2   Text Conventions

Note: Notes highlight additional helpful information.

*Important: **These statements provide particularly important instructions or additional information that is critical to the operation of the equipment.***

*Warning: **These statements provide critical information that may prevent physical injury, equipment damage or data loss.***

1.3   Ikôn Rugged PDA Features

*Important: **For all safety, regulatory and warranty information, refer to the 'Ikôn Rugged PDA Regulatory & Warranty Guide', PN 8000148.***

The Ikôn is a ruggedized personal digital assistant that can be ordered with one of the following operating systems: Windows Mobile 6.1 Professional with a phone option or Windows Mobile 6.1 Classic. This Ikôn is intended for use in commercial and light industrial applications with a focus on real time wireless data transactions. All possible bar code input methodologies are supported by one of a variety of scanners available. Optimization for specific operational environments is supported with a wide range of peripheral options and carrying accessories.

Model

• Ikôn Rugged PDA – Model Number 7505

Processor

• XScale PXA270 624 MHz
• 256 MB Flash ROM, 128 MB RAM

Operating System

- Microsoft Windows Mobile 6.1 Professional
- Microsoft Windows Mobile 6.1 Classic

User Interface

- Colour Touchscreen Display 3.7 in. (9.398 cm)
  - Full VGA 480 x 640 resolution
  - Transflective, portrait mode TFT
  - Adjustable Backlight
- Touchscreen
  - Passive stylus or finger operation
  - Signature capture
- Keyboards
  - Full Alpha-Numeric
  - Numeric
  - Ergonomically enhanced for ambidextrous, one-hand operation
  - Backlit, high durability hard-capped keys

Wireless Communication

Optional expansion modules for:

- 802.11b/g (proprietary module) operating in the 2.4 GHz band:
  - Supports IEEE 802.11b data rates of 1,2,5.5 and 11 Mbps using Direct Sequence Spread Spectrum (DSSS)
  - Supports IEEE 802.11g data rates of 6,9,12,24,36,48 and 54 Mbps, using Orthogonal Frequency Division Multiplexing (OFDM) base band modulation
- GSM/GPRS EDGE (via expansion interface)
  - Quad-Band – 850/900/1800/1900
  - Voice and Data
  - GPRS Class B, Multi-Slot Class 12
  - EGPRS Class B, Multi-Slot Class 12
- UMTS
  - UMTS/HSDPA: Triple band, 850//1900/2100MHz
  - GSM/GPRS/EDGE: Quad band, 850/900/1800/1900MHz

- Bluetooth class 2, ver 2.0
    - support Enhanced Data Rate (EDR) for up to 3 Mbps data rate
    - support Advanced Frequency Hopping (AFH) for reduced interference with 802.11b/g radio

Note: 802.11b/g, GSM, and Bluetooth are available simultaneously.

1.3.1 The Ikôn Rugged PDA

Figure 1.1 Ikôn Rugged PDA – Qwerty And Numeric Versions

Figure 1.2 Phone Keys

Note: The [Talk] and [End] phone keys printed on the Ikôn shown in the picture above are useful for units equipped with Windows Mobile 6.1 Professional that support the phone feature. Refer "Sending & Ending Phone Calls Using The Phone Keypad" on page 20 for details.

BASIC CHECKOUT

2

2.1 Preparing The Ikôn For Operation

2.1.1 The Battery

The Ikôn is powered with a 5000 mAh Lithium-Ion battery pack, model number CH3000.

Before charging the battery, it is critical that you review the battery safety guidelines in the "Ikôn Rugged PDA Warranty & Regulatory Guide", PN 8000148.

> ⚠️ *Important: **If the Ikôn is switched on and you need to remove the battery, press and hold down the Power button until the 'Shutdown' screen is displayed. Choose 'Shutdown' and tap on OK before removing the battery.***

Battery packs shipped from the factory are charged to approximately 40% and must be fully charged prior to use. Batteries can be charged using a variety of chargers and docking stations along with an Ikôn internal charger. When using the internal charger, a suitable power source is required. All chargers and docking stations are described in Chapter 7: "Peripheral Devices & Accessories".

2.1.2 Installing The Battery

- To unlock the battery cover, turn the left-hand battery fastener to the left, and turn the right-hand battery fastener to the right.
- Remove the battery cover.
- Snap the charged battery into the Ikôn. Replace the battery cover, and lock the fasteners.

2.1.3 Switching The Ikôn Rugged PDA On

- Press and hold down the **Power** button for at least one second.
- When the centre LED flashes yellow, release the **Power** button.

The desktop *Today* screen is displayed.

> 📖 *Note: If the Ikôn was already in use and is in suspend state, pressing the Power button 'wakes' it from this state. The screen in which you were working prior to the suspend state is displayed.*

> ⚠️ *Important:* ***If your Ikôn fails to power up, consider the following troubleshooting options: the battery capacity may be too low (<100 mAh), it may be overheated (>60° C), or the battery may have fallen below the configured suspend threshold.***
>
> ***If you provide AC power to the Ikôn and either the battery capacity is too low or is overheated, a yellow LED will flash and the unit will <u>not</u> switch on. To switch on the PDA, replace the overheated battery or, in the case of a depleted battery, wait for the capacity to reach an acceptable level.***
>
> ***However, if you provide AC power to an Ikôn with a battery that falls below the configured suspend threshold, the PDA <u>will</u> switch on.***

2.1.4 Switching The Ikôn Rugged PDA Off

- Press and hold down the **Power** button.

A *Shutdown* screen like the one below is displayed. Each option switches off different elements of the Ikôn; an associated description outlines the results.
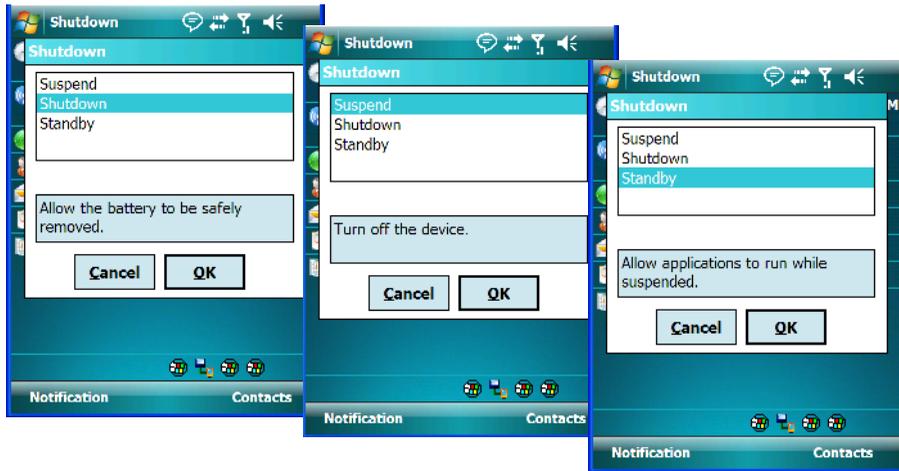
Choosing **Shutdown** switches all radios off before placing the Ikôn in suspend state. The blue radio LED will stop blinking indicating that all radios are off. As the dialog box indicates, ***choose this option when you need to swap the battery***.

Choosing **Suspend** places the PDA into a power-saving *suspend* state. In this state, all radios remain on, but the display, keyboard backlight and processor are switched off. When the Ikôn is turned on from this state, operation resumes within a few seconds in the screen in which you were working prior to suspend.

If you choose **Standby**, the display is turned off, the keyboard is locked and the touchscreen is locked. The processor remains on so that any running applications will continue while the Ikôn is in a *Standby* state. In addition, the radios remain on. Keep in mind that because the processor continues to run, *Standby* mode consumes more power than *Suspend* mode.

Keep in mind that if you press and immediately release the *Power* button, a dialog box appears letting you know that the Ikôn is preparing to enter *suspend* state. Only by *pressing and holding down* the *Power* button can you choose between *Suspend* and *Shutdown* and *Standby*.

2.2   The Getting Started CD

The *Getting Started CD* shipped with your Ikôn runs automatically when inserted, displaying a start-up screen.

Tapping on *Next* in the start-up screen displays a screen listing your setup and installation options.
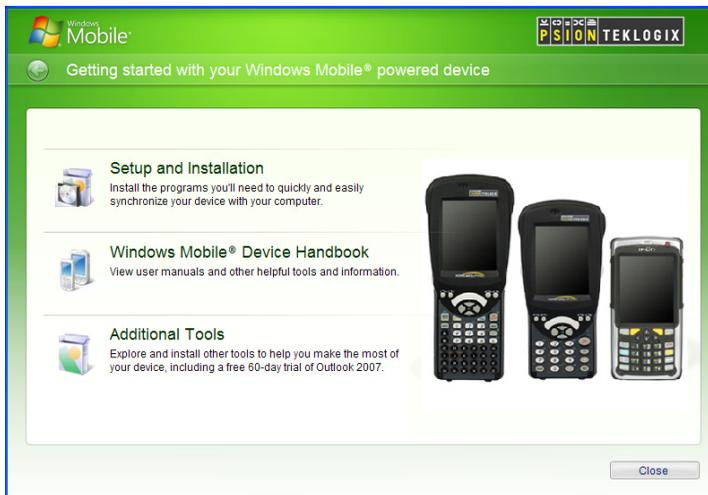
Tapping on one of these items provides the following options:

- **Setup and Installation –** allows you to install the Windows Mobile® Device Handbook and ActiveSync. When you tap on this option, only items that are not already present on your PC are installed. For example, if you've previously installed Active-Sync, it is automatically detected and is not reinstalled.

- **Windows Mobile® Device Handbook** – guides you through the steps required to access these options:

   Additional Windows Mobile Resources – lists Windows Mobile web sites that provide additional, helpful information

   Free Ringtones, Downloads, Help and Other Benefits – with registration at Microsoft, you can receive free ring tones, downloads, newsletters and information to help you use your PDA to full advantage.

   Set up E-mail – provides step-by-step instructions to help you set up your e-mail account.

- **Additional Tools** – allows you to download a 60 day trial of Microsoft Office Outlook 2007.

2.3   Data Transfer Between The PC & The Ikôn

Note: For details about connecting your Ikôn to a PC using a docking station, refer to "Operating The USB Dock" on page 256.

Data transfer options vary slightly depending on the type of operating system installed in your PC. Microsoft® ActiveSync® is PC connectivity software that can be used to connect your Ikôn to a PC running this software. ActiveSync works only with the Windows XP SP2 operating system or earlier.

If the Windows Vista® operating system is installed in your PC, ActiveSync is not required to transfer data between your Ikôn and your PC.

By connecting the Ikôn to a PC with a cable, you can:

- View Ikôn files from Windows Explorer.
- Drag and drop files between the Ikôn and the PC in the same way that you would between PC drives.
- Back up Ikôn files to the PC, then restore them from the PC to the Ikôn again, if needed, and so on.

2.3.1 Using Microsoft® ActiveSync®

You can install active sync using the *Getting Started CD* provided with your Ikôn. Refer to "The Getting Started CD" on page 13 for details. You can also follow the step-by-step instructions provided at the following website:

http://www.microsoft.com/windowsmobile/activesync/activesync45.mspx

2.3.2 Using Windows Vista®

If you have Windows Vista, your Ikôn data transfers do not require ActiveSync. To transfer data between your PC and your rugged PDA:

- Tap on **Start>Computer** to display the drives. Your Ikôn will be visible here.
- Open drives, files and folders as you would on your PC.

2.4 Aligning (Calibrating) The Touchscreen

Refer to "Aligning (Calibrating) The Touchscreen" on page 45 for details.

2.5   The Getting Started Centre

The *Getting Started* centre outlines how to perform basic tasks when initially setting up your Ikôn. You can access the *Getting Started* centre from the **Today** screen, or you can tap on **Start>Programs**, and then tap on the **Getting Started** icon.
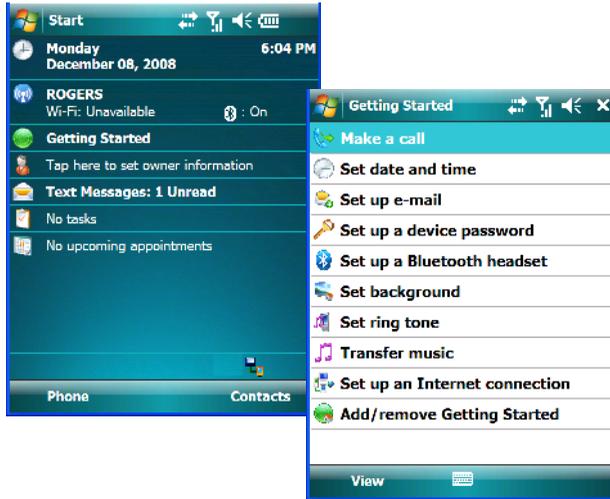
Tapping on *Getting Started* displays a list of the basic setup option you may need to get your Ikôn ready for operation.

•   To get instructions about an operation, tap on an option in the *Getting Started* list. Follow the instructions provided.

- Where applicable, a link to an associated screen is provided.Tap on the link to display the screen and complete your task.

- To go back to the *Getting Started* menu, tap on the **Back** softkey in the taskbar at the bottom of the screen.

2.6   Setting Up An 802.11b/g Radio-Summit Client Utility

This section describes the steps required to set up the 802.11b/g Summit Radio using the *Summit Client Utility* (SCU).

To review details about the options within the SCU tabs – *Main*, *Profile*, *Status*, *Diags* and *Global* – review Appendix A: "Summit Client Utility (SCU)".

2.6.1   Assigning The IP Address

Before launching the SCU, you need to configure the method by which the IP address will be obtained.

- Tap on **Start>Settings>Connections tab>Wireless Manager** icon.

- In the *Wireless Manager* dialog box, tap on the **Settings** button.

- Tap on the **Network Adapters** tab, and then tap on -**Summit WLAN Adapter** in the list.

The *Summit WLAN Adapter* dialog box is displayed. You have two options:

- Tap on **Use server-assigned IP address** to have an address assigned automatically, *or*

  If you want to use a particular IP address, tap on **Use specific IP address**, and type the preferred address.

  If you tap on the *Name Servers* tab, you can statically configure the DNS servers; however, if you use DHCP for IP address assignment, DNS is usually supplied by the same server that supplied the IP addresses.

2.6.2   Using The SCU To Connect To The WLAN

This section provides a quick set of steps to create a profile. Detailed information about each of the SCU tabs – *Main, Profile, Status, Diags* and *Global* – is provided under Appendix A: "Summit Client Utility (SCU)".

To launch the SCU so that your PDA can connect to a wireless LAN:

• Tap on **Start>Programs**, and then tap on the **SCU** icon.
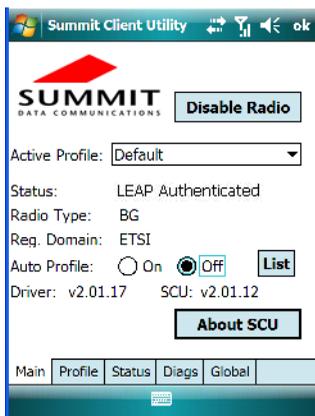
• Tap on the **Profile** tab.
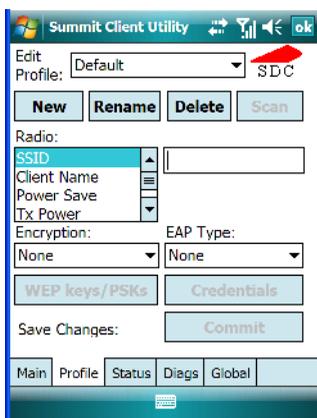
• Tap on **New** to define a new *Profile*.
• Type a **unique name** for your configuration using any alpha-numeric combination to uniquely identify this profile.
• Tap on **OK** to return to the *Profile* tab.

To configure the *SSID* for the network to which you want to associate:

• Type an **SSID** in the text box to the right of SSID. This field is limited to 32 characters.

- Tap on **Commit** to save your SSID setting.

⚠ *Important:* ***To learn more about the other options available in the radio attributes list, refer to "Profile Tab" on page A-2 in Appendix A: "Summit Client Utility (SCU)".***

To configure authentication and encryption, use the appropriate dropdown menus in the *Profile* dialog box, and enter credentials for IEEE 802.1X EAP types or WEP keys by tapping on the *Credentials* button just below the dropdown menus.

- Tap on the **EAP type** dropdown menu, and choose the appropriate type of authentication – *LEAP, EAP-FAST, PEAP-MSCHAP,PEAP-GTC* and *EAP_TLS*.
- Once you've chosen an *EAP type*, tap on the **Credentials** button, and type credentials for IEEE 802.1X EAP types.

⚠ *Important:* ***Refer to "SCU Security Capabilities" on page A-5 and Appendix A: "EAP Credentials" in Appendix A: "Summit Client Utility (SCU)" for details about security settings.***

To configure encryption:

- Tap on the **Encryption** dropdown menu, and choose the appropriate type of encryption – *Manual WEP, Auto WEP, WPA PSK, WPA TKIP, WPA2 PSK, WPA2 AES*, *CCKM TKIP*, *CKIP Manual* or *CKIP Auto*.

If you choose *Manual WEP, WPA PSK* or *WPA2 PSK*:

- Tap on the **WEP/PSK Keys** button. For *Manual WEP*, choose up to four static WEP keys. For *PSK*, type an ASCII passphrase or hex PSK.
- Configure any other settings that are supplied by the network administrator for the SSID to which you will associate.
- Make certain that you tap on **Commit** following each change.

Once you've completed the configuration:

- Tap the **Main** tab. Tap on the **Active Profile** dropdown menu – your new profile will be listed in the dropdown menu.

When you tap on the profile you created, the 802.11b/g radio module attempts to connect to the network using the following steps:

1. Associate with SSID.
2. Authenticate to network.
3. If EAP authentication is being used, derive dynamic encryption keys.

> 4. If DHCP is being used by the network, obtain an IP address.

If the 802.11b/g is not connecting properly:

- Tap on the **Status** tab.

The *Status* dialog box lists the IP and MAC address, and indicates the current state of the radio, the signal strength, channel and so on.

You can also use the *Status* screen for DHCP renewal and ICMP Echo Requests (Pings).

Important: For details about the Status dialog box, refer to "Status Tab" on page A-8 in Appendix A: "Summit Client Utility (SCU)".

2.7 The Phone (Windows Mobile 6.1 Professional Only)

Ikôns running Windows Mobile 6.1 Professional are equipped with phone capabilities.

Note: Remember that you can use the Help feature to find more details about phone options. Help screens are context-sensitive – they provide guidance that is specific to the dialog box you have opened. To further narrow your search, tap on the Search softkey in the Help screen, and type the topic about which you require information.

2.7.1 The Phone Keypad

The phone keypad provides phone services like those you may find on your cellular phone. You can use the phone keypad provided with your Ikôn to, for example, send and receive phone calls, make conference calls, view your call history, set up speed dial numbers, etc.

2.7.1.1 Sending & Ending Phone Calls Using The Phone Keypad

To display the phone keypad:

- Tap on **Start menu>Phone**.

Note: You can also press the [Talk] key on the Ikôn keyboard to display the phone keypad providing it has been activated. The [Talk] key is labelled with a green telephone receiver icon. Refer to "Sending & Ending Calls Using The Ikôn Keyboard" on page 25 for details.

Phone settings

Network emergency number

Directory Assistance

To dial a phone number:

• Use the phone keypad to enter the phone number, and tap on **[Talk]** to dial the phone number.

To end a phone call:

• Tap on **[End]** on the phone keypad.

Note: You can also tap on the [End] key on the physical keyboard of the Ikôn to end the call. The [End] key is labelled with a red phone receiver. Refer to "Sending & Ending Calls Using The Ikôn Keyboard" on page 25 for details.

2.7.1.2 Making A Conference Call

To set up a conference call between yourself and two or more other parties:

• In the phone keypad, type the **first phone number**. Tap on **[Talk]**.

• While you are connected to the *first number*, tap on **Menu>Hold**.

• Type the **second number**. Tap on **[Talk]**.

• Tap on **Menu>Conference**.

• To add another party, tap on **Menu>Hold**, type the **number**, and then tap **Menu>Conference**.

• Tap on **[End]** to disconnect all calls.

2.7.1.3 Receiving An Incoming Call

To answer an incoming call:

• Tap on the **[Talk]** button; it's labelled with a *green* phone receiver.

2.7.1.4 Programming Speed Dial

The phone keypad provides a *Speed Dial* button for quick access to frequently used numbers.

•   In the phone keypad, tap on the **Speed Dial** button to display the *speed dial Phone* dialog box.
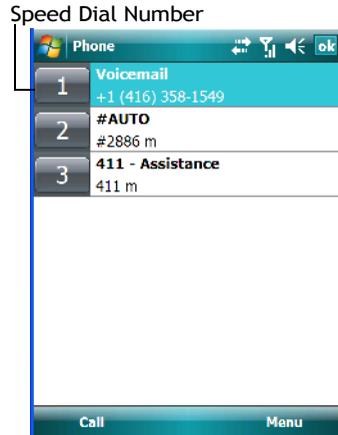
Speed Dial Number

This dialog box lists the phone numbers and the speed dial key to which the phone number has been assigned.

•   Tap on the **Speed Dial Number** (to the left of the phone number you want to dial), *or*

Tap on the **Call** softkey; the number is dialled for you.

Using The Phone Keypad To Program a Speed Dial

There are a number of ways to add a speed dial number. You can create a speed dial number using the *Contacts* list or by using the *Speed Dial* button on the phone keypad.

Adding A New Phone Number

•   In the *phone keypad*, tap on the **Speed Dial** button.
•   In the speed dial *Phone* dialog box, tap on **Menu>New**.

• In the list, choose a **contact** for a speed dial.

• Tap on **Enter a name...**, and type a **contact name**, or tap on a name in the list.
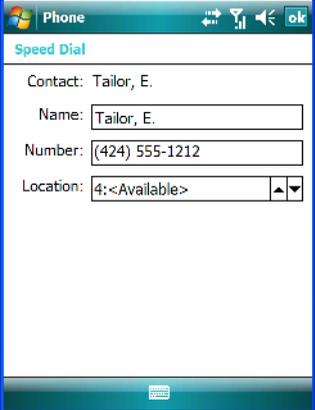
A sequential speed dial key is automatically assigned in the *Location* field. You can tap on the arrows to the right of the *Location* field to change the auto assignment.

Using The Contact List To Program A Speed Dial

- Tap on the **Contact** softkey in the taskbar at the bottom of the *Today* screen.
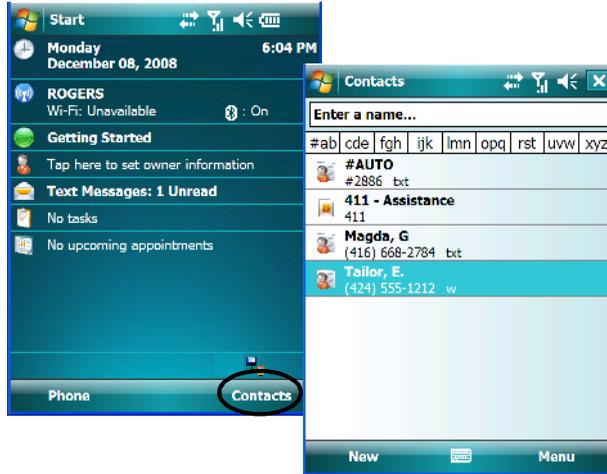
- Tap on the **Contact** to which you want to assign a speed dial number.
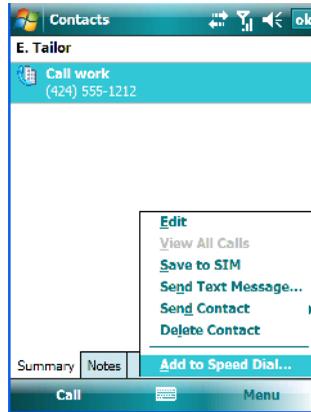
- In the *Summary* screen, tap on **Menu>Add to Speed Dial**.

2.7.2 Sending & Ending Calls Using The Ikôn Keyboard

An Ikôn that supports the phone feature is equipped with a [Talk] and an [End] call key on the keyboard.

Using these phone keys, you can display the phone keypad and answer, send and terminate phone calls.

2.7.3 Managing Phone Settings

You can adjust phone settings such as the ring type and tone, choose phone services such as barring calls, and you can also determine network selections. There are a number of ways you can access phone settings.

• In the *Navigation Bar*, tap on the **Phone Settings** hotkey.

- In the pop-up *Phone bubble*, tap on the **Settings** link, *or*

Tap on Settings   Phone Settings Hotkey
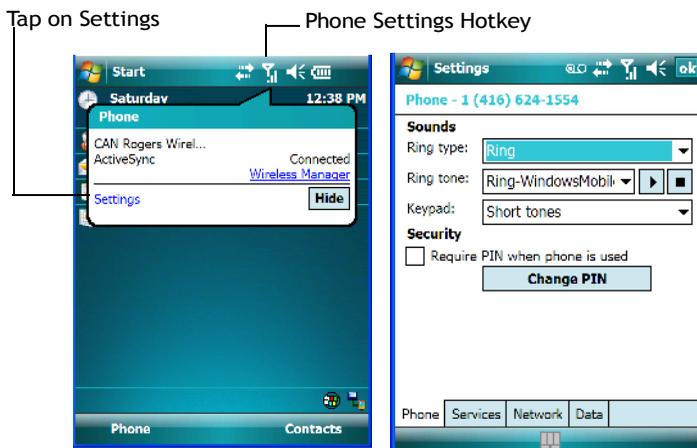
- Tap on **Start>Settings>Phone** icon.

*Note: If the phone keypad is opened, tap on **Menu>Options** to display the Phone Settings dialog box.*

2.7.3.1 Phone Tab

Ring Type And Ring Tone

Ring Type allows you to tailor the type of ring used for incoming calls. The *Ring Tone* drop-down menu allows you to determine the ring tone of incoming phone calls.

Keypad

This option allows you to determine the type of sound that keypad keys emit as you tap them. You can also turn off keypad sounds.

2.7.3.2 Security Tab

Tap in the checkbox (add a checkmark) to enable PIN Security.

This option allows you to assign a *PIN* (Personal Identification Number) so that your PDA is protected from unauthorized use. Your SIM card manufacturer provides the default *PIN* which you can change in this field.

Changing A PIN

• Tap on the **Change PIN** button and use the phone keypad to enter your existing SIM card PIN. Tap on the **[Enter]** key in the phone keypad.
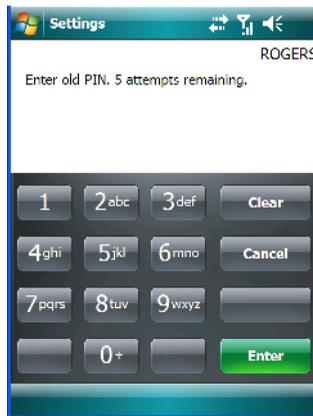
> ⚠️ ***Important:*** ***If you enter an incorrect PIN, a message is displayed letting you know that you'll need to reenter the correct value.***
>
> ***You have five chances to enter the correct PIN. If you exceed this number, the SIM will be disabled automatically. You will be asked to enter a PUK (Personal Unlocking Key). Your system administrator will be able to provide this information.***

Once you've entered the correct PIN, a new screen appears asking that you enter you new PIN.
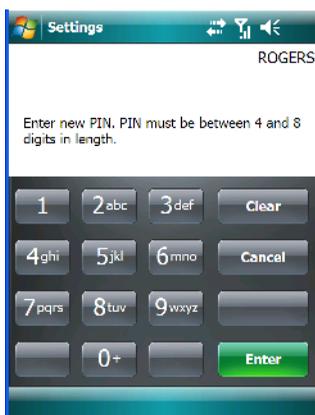
- Type your **new PIN** – a number consisting of between 4 and 8 digits in length. Tap on **Enter**.

A new message lets you know that you need to confirm your new PIN.

- Retype your **new PIN**. Tap on **[Enter]** when you're finished.

Enabling PIN Security

To activate PIN security:

- Tap in the **checkbox** to the left of *Require PIN when phone is used*.

When security is enabled, you will be prompted to enter a PIN before you are allowed to use the phone.

📖 *Note: Whenever this option is enabled or disabled, you will be asked to enter your PIN.*

2.7.3.3 Services Tab
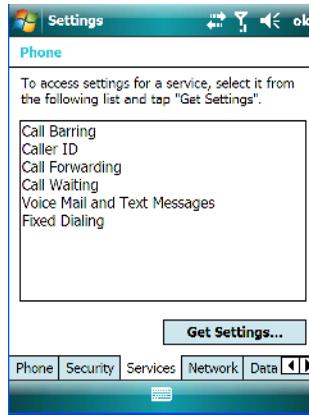
The *Services* tab allows you to customize the behaviour of your phone. You can, for example, block all incoming calls, tailor to whom your caller ID will be transmitted, set up call forwarding and so on.

• Tap on the **service** you want to set up. Tap on **Get Settings**.

The *service* dialog boxes allow you to tailor your available services to meet your requirements. Remember that when a particular service dialog box you've chosen is displayed, you can always tap on **Start>Help** to get additional information.

Voice Mail Setup

If your service includes *Voice Mail*, a temporary passcode is automatically assigned. It is mailed to you as a text message.

• Tap on **Start>Messaging** to display your temporary passcode.

To activate your voice mail:

• From a land line, dial your wireless phone number.
• Allow the Ikôn to ring until it is automatically picked up by the voice mail service. At the greeting, type #.

You will be prompted to *enter your temporary passcode*. A tutorial will lead you through the voice mail setup. When you've assigned your personalized passcode, keep it in a secure place.

2.7.3.4 Network Tab
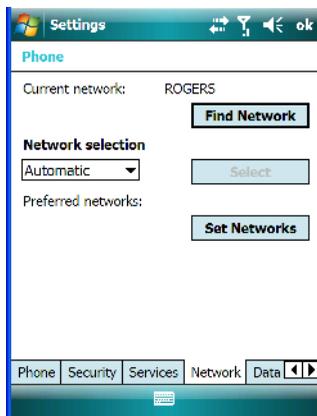
This dialog box identifies your current network, and allows you to view available networks and determine the order in which other preferred networks will be accessed if the current one is unavailable. You can also specify manual or automatic network changes, and you can add a network.

2.7.3.5 Data Tab
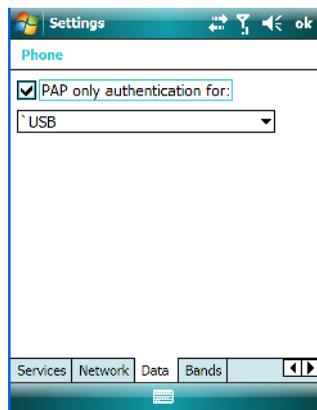
This screen is used to configure the connection to the ISP. You can select a network connection from the dropdown menu.

By default the connection uses CHAP (Challenge Handshake Authentication Protocol); however, if your ISP does not support CHAP, tapping in the box to the left of *PAP only authentication for:* directs the connection to use PAP (Password Authentication Protocol) instead.

Note: If your are not using PAP, the rugged PDA automatically defaults to CHAP.

2.7.3.6 Bands
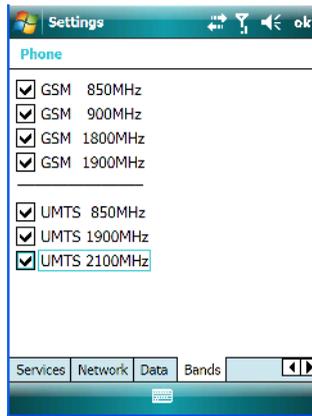
By default, all frequency bands are enabled. Bands should not be disabled without knowledge about which bands are used by your network; an incorrect setting will prevent the WWAN modem from finding the network.

2.8 Resetting The Ikôn

When you reset your Ikôn, the registry settings and any installed programs stored on the *flash* file system and data are preserved whether you perform a cold or a warm reset. RAM memory is cleared and the RAM disk is reinitialized.

The difference between the two forms of reset is that after a *cold* reset, some *hardware* options are reset. For this reason, a cold reset should only be used in rare, critical situations.

2.8.1 Performing A Warm Reset

• Press and hold down the **[BLUE]** key and the **[ENTER]** keys simultaneously for a minimum of six seconds.

Note: You do not need to reset your Ikôn after configuring the radio.

2.8.2   Performing A Cold Reset

To perform a cold reset and launch the Windows Mobile 6.1 operating system:

• Press and hold down the **[ENTER]** key and the **Power** button simultaneously for a minimum of six seconds.

GET TO KNOW THE IKÔN 3

3.1   Features Of The Ikôn Rugged PDA

3 LEDs
(Light Emitting Diodes)

Receiver

Power Button

Microphone

Enter Button

Vertical Scroll
Button

RIGHT SIDE

Audio Port

Scan Button

Volume Button

TOP

Scanner/Imager

LEFT SIDE

Figure 3.1 Back of Ikôn

Speaker

Camera (optional)

Hand Strap Anchor

Battery Latch

Battery Latch

Cover for Battery & SIM/microSD Card Compartments

Stylus

Figure 3.2 Ports

Docking Port/ USB On-The-Go

DC IN Port

Hand Strap Anchor

3.2   The Battery

The Ikôn operates with a 5000 mAh, Lithium-Ion battery pack, model number CH3000.

Preparing the Ikôn for operation requires that a battery pack be charged and installed in the Ikôn.

3.2.1   Battery Safety

⚠️ *Important:* ***Before attempting to install, use or charge the battery pack, it is critical that you review and follow the important safety guidelines in the quick reference guide entitled 'Ikôn Rugged PDA Regulatory & Warranty Guide', PN 8000148.***

3.2.2   Removing The Battery Pack

⚠️ *Important:* ***Always shut down the Ikôn <u>before</u> removing the battery. To safely remove the battery, press and hold down the Power button. Choose "Shutdown" in the 'Shutdown' screen and tap on OK.***

Keep in mind also that all Ikôns are equipped with internal super-capacitors that will save the current data for up to 5 minutes while the battery is swapped.

Refer to "Preparing The Ikôn For Operation" on page 11 for more details about removing and installing the battery.

3.2.3   Battery Swap Time

Assuming the default power saving parameters and battery reserve level have not been altered, battery swap time is approximately 5 minutes – you will not lose data if the battery is replaced within this time frame.

To protect data, the safest place to store data is on a microSD memory card or externally to the device on a USB memory stick or on a PC.

The *Suspend Threshold* feature allows you to determine the battery capacity at which the Ikôn will be shut down. If left at the default value, *Maximum Operating Time*, the Ikôn will run until the battery is completely empty; the RAM is only backed up for a short period of time. If you choose *Maximum Backup Time*, the Ikôn shuts off with more energy left in the battery so RAM can be backed up for a longer period of time.

(Refer to "Suspend Threshold And Estimated Battery Backup" on page 168 for details about reserving battery power for data backup purposes.)

3.2.4   Charging The Battery

Batteries shipped from the factory are charged to approximately 40% of capacity. They must be fully charged prior to use.

Note: Do not leave a spare battery to charge for more than 72 hours. Charging for more than 72 hours may damage the battery or lead to charge capacity reduction.

Important: If the battery is overheated (>60° C) or if the battery capacity is very low (<100 mAh), the unit will not switch on when the Power button is pressed. Under the above conditions, when AC power is applied, the Ikôn will still refuse to power up; instead, a yellow LED will begin blinking and until the battery is replaced, or in the case of low battery capacity, the battery is charged to an acceptable level, the Ikôn will not switch on.

Keep in mind also that, along with the battery, the Ikôn is equipped with internal, super-capacitors that preserves data stored on the Ikôn for a short period of time while the battery is swapped.

3.2.4.1 Chargers And Docking Stations

Important: FOR DETAILED INFORMATION about chargers and docking stations, refer to Chapter 7: "Peripheral Devices & Accessories" beginning on page 241.

Lithium-Ion battery packs must be charged before use. These batteries can be charged with a variety of chargers and docking stations. These include:

- AC wall adaptor (Model No. PS1050 - G1) operates as an AC power source and when plugged in, also charges the battery installed in the Ikôn. (see page 262)
- Desktop Docking Station (Model No. CH4000) operates as both a charger and a docking station. Operating as a charger, both the battery installed in the Ikôn and a spare battery can be charged simultaneously. (see page 254)
- Quad Docking Station (Model No. CH4004) can charge the battery of up to four Ikôns inserted in the docking station. (see page 259)

Note: Refer to "Monitoring The Battery And Maximizing Run Time" on page 48 for additional information about the battery.

Important: To avoid damaging the battery, chargers will not begin the charge process until the battery temperature is between 0°C to 40°C (32°F to 104°F).

3.3   The Keyboards

3.3.1   Ikôn Keyboards

The following Ikôn keyboards are available:

•   28-key numeric keyboard with or without [Talk] and [End] phone keys

•   47-key QWERTY keyboard with [Talk] and [End] phone keys. This keyboard option
is *only* available for Ikôns equipped with the Windows Mobile 6.1 Professional
operating system.

Figure 3.3   QWERTY And Numeric Keyboards With Phone Keys

Most of the keys on these keyboards operate much like a desktop computer. Where a key or
key function is not consistent with the PC keyboard, the differences are noted.

The [BLUE] and [ORANGE] modifier keys provide access to additional keys and
system functions. These functions are colour coded in orange and blue print above the
keyboard keys.

Note: Almost all keys can be reprogrammed to suit your requirements.

3.3.2   Locking The Keyboard

You can lock the keyboard to prevent accidental key presses. To set up the locking/unlocking key sequence:

• Tap on **Start>Settings>Buttons**. Tap on the right arrow icon ◀▶ in the bottom-right corner of the screen to scroll to the **Lock Sequence** tab.

Refer to "Lock Sequence" on page 132 for details about setting up this function.

3.3.3   Modifier Keys

The [SHIFT], [CTRL], [ALT], [BLUE] and [ORANGE] keys are modifier keys. Pressing a modifier key changes the function of the next key pressed. For example, on an 47-key keyboard, a left bracket is printed in orange print above the [U] key. Pressing the [ORANGE] key, a modifier key, followed by the [U] key displays a left bracket rather than the letter *U.*

The [SHIFT], [CTRL] and [ALT] keys operate much like a desktop keyboard except that they are not chorded (two keys held down simultaneously). The modifier key must be pressed first followed by the key whose function you want modified.

*Note: Keep in mind that the [ALT] and [CTRL] keys are only available on **numeric** keypads that are **not** equipped with phone keys. You can, however, access the [CTRL] key using the onscreen, soft keyboard.*

3.3.3.1   Activating Modifier Keys & The Shift-State Indicator

When a modifier key is pressed, it is represented in the shift-state indicator icon in the softkey bar at the bottom of the screen, making it easier to determine whether or not a modifier key is active. If the shift-state indicator icon is not visible (you can only see the soft keyboard icon), you may need to take a few steps to display the shift-state indicator icon.

• Tap on **Start>Settings** followed by the **Buttons** icon.
• Tap on the **One Shots** tab at the bottom of the screen.
• Tap in the check box next to *Show modifier key state* to display the shift-state indicator icon.

Figure 3.4 Shift-State Indicator Icon
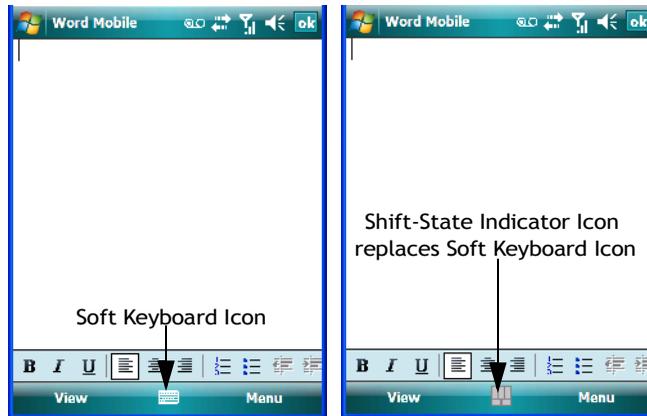
3.3.3.2 Locking Modifier Keys

*Note: The locking behaviour of the modifier keys can be changed so that, for example, pressing a modifier key **once** will lock the key 'on'. Refer to "One Shots" on page 125 for details. Note too that by default, the [ORANGE] key is locked 'on' when pressed only once.*

When a modifier key is locked 'on', it will remain active until it is pressed again to unlock or turn it off.

To help you identify when a modifier key is locked 'on', the key is represented in the shift-state indicator icon with a black frame around it.

Figure 3.5 Shift-State Indicator Icon – Locked Modifier Key

Once a modifier key is unlocked or turned off, it is no longer displayed in the shift-state indicator icon.

3.3.4 The Keys

The [SHIFT] Key

The [SHIFT] key is used to display uppercase alpha characters and provide access to the symbols above the numeric keys. You can lock this key 'on' so that when you press an alpha

key, an upper case character is displayed. When you press a numeric key, the associated symbol on the numeric key is displayed on the screen.

If you press the [SHIFT] key twice, it is locked 'on' essentially acting as a [CAPS] key, displaying uppercase characters. In this state, if you type a numeric key, the number rather than the symbol above it is displayed. Press [SHIFT] again to turn the [CAPS] function off.

The Arrow Keys

The Arrow keys are located near the top of the keyboard. The arrow keys move the cursor around the screen–up, down, left and right. The cursor is the flashing box or underline character that indicates where the next character you type will appear.

The [BKSP/DEL] Key

The [BKSP] key (sometimes referred to as destructive backspace) moves the cursor one character to the left, erasing the incorrectly entered key stroke.

The [DEL] key ([BLUE] [BKSP]) erases the character at the cursor position.

The [ALT] And [CTRL] Keys

The [ALT] and [CTRL] keys modify the function of the next key pressed and are application dependent. Note that these keys are *only* available on *numeric* keypads that are ***not*** equipped with [Talk] and [End] phone keys; however, you can access the [CTRL] key using the on-screen, soft keyboard.

The [TAB] Key

Typically, the [TAB] key moves the cursor to the next field to the right or downward.

The [ESC] Key

Generally, this key is used as a keyboard shortcut to close the current menu, dialog box or activity and return to the previous one.

The [SPACE] Key

Pressing this key inserts a blank space between characters. In a Windows dialog box, pressing the [SPACE] key enables or disables a checkbox.

The [SCAN] Keys

The Ikôn is equipped with two [SCAN] keys located just below the display and a [SCAN] button situated on the left side of the PDA. [SCAN] keys activate the scanner beam. For units that do not have internal scanners, these keys can be remapped to serve other functions.

The Function Keys-[F1] to [F10]

Function keys [F1] to [F10] perform special, custom-defined functions. These keys are accessed by pressing [BLUE] followed by numeric keys [1] to [10]. They can be used with the Windows Mobile 6.1 operating system or another application.

The Macro Keys

While macro keys are not physically stamped on the keyboard, up to 12 macro functions can be added using the *Scancode Remapping* function. Refer to "Scancode Remapping" on page 129 for details about mapping keys.

For details about creating a macro, refer to "Keyboard Macro Keys" on page 127.

3.3.5 The Numeric Keyboard – Accessing Alpha Keys

On numeric keypads, you'll need to take a few extra steps to access the alphabetic characters.

3.3.5.1 Choosing A Single Alpha Character

The examples below illustrate how to access, A, B and C, all of which are printed in orange characters above the numeric key [2].

Important: The letters you choose appear in the softkey bar, providing a visual indicator of which letter will be displayed on the screen.

To choose the letter a:

- Press the [ORANGE] key, and type the numeric key [2].

Note: To choose the second, third or fourth alpha character assigned to a numeric key, you may want to lock the [ORANGE] key 'on'. By default, the [ORANGE] key is locked 'on' when pressed once. However, depending on how your Ikôn is set up in the 'One Shots' tab, you may find that you need to press the [ORANGE] key twice to lock it 'on'. Refer to "One Shots" on page 125 for details.

To choose the *second* letter in the sequence—in this example, the letter b:

- Lock the [ORANGE] key 'on'. A shift-state indicator icon in the softkey bar represents the orange key with a black frame around it to indicate that this key is locked 'on'.
- Press numeric key [2] *twice* to display the letter b.

To choose the *third* letter in the sequence—in this example, the letter c:

- Lock the [ORANGE] key 'on'.

• Press numeric key [2] ***three times*** to display the letter c.

Note: Keep in mind that there is a time-out if you pause for one second between key presses when selecting the second, third or fourth letters on a key. For example, suppose you want to type the letter 'c' – you would need to press the [2] key three times. With the [ORANGE] key locked 'on', if you press [2] twice and then pause between key presses for 1 second, the letter 'b' will be selected automatically.

You can adjust the delay between alpha key presses using the 'Sequence' settings. Refer to "Sequence" on page 125 for details.

3.3.5.2 Creating Uppercase Letters

To display capital letters, you need to first lock the [SHIFT] key 'on'.

• Press the [SHIFT] key twice.

All alpha keys are displayed in uppercase until you press the [SHIFT] key again to 'unlock' (switch off) the function of this key.

3.3.5.3 Choosing Multiple Alpha Characters

• Lock the [ORANGE] key 'on'.

Each time you press a numeric key from [2] through [9], an alpha character will be displayed on the screen. Remember that you can refer to the softkey bar for a visual indication of which alpha key will be displayed on the screen.

Important: ***Once you have finished typing alpha characters, remember to turn off or unlock the [ORANGE] key. Check the shift-state indicator icon (refer to Figure 3.5 on page 41) to make certain that the key is turned off.***

3.3.6   The Keypad Backlight

The intensity of the keypad backlight can be configured using the *Backlight* icon accessed by tapping on *Start>Settings*. Refer to "Backlight" on page 146 for details about this option.

3.4   The Display

Ikôns are equipped with display backlighting to improve character visibility in low light conditions. The backlight switches on when a key is pressed or the screen is tapped.

3.4.1   Setting The Backlight Intensity & Duration

To set the backlight intensity and the duration of time that the backlight will remain on, you'll need to choose the *Backlight* icon.

•   Tap on **Start>Settings** and then, tap on **System tab>Backlight icon.**

Refer to "Backlight" on page 146 for details.

3.4.2   Adjusting the Backlight Using The Keyboard

The display backlight can be adjusted using a keyboard key sequence. The key sequence varies depending on the type of keyboard:

•   For *alphanumeric* keyboards, lock the **[ORANGE]** key 'on'. Press **[ESC]** until a satisfactory brightness level is attained.

•   For *numeric* keyboards, lock the **[BLUE]** key 'on'. Press the asterisk key **[*]** until a satisfactory brightness level is attained.

⚠ *Important:* ***Keep in mind that this sequence cycles the display backlight up to full brightness and once reached, begins to dim the backlight until the display fades to black – nothing is visible. At this point, you'll need to continue pressing these keys until the display brightens up to a usable level.***

3.4.3   Aligning (Calibrating) The Touchscreen

If your touchscreen has never been aligned (calibrated) or if you find that the stylus pointer is not accurate when you tap on an item, follow the steps below.

- Tap on **Start>Settings**. Tap on the **System** tab to display the *Screen* icon.

- Tap on the **Screen** icon to display the *Alignment* tab.
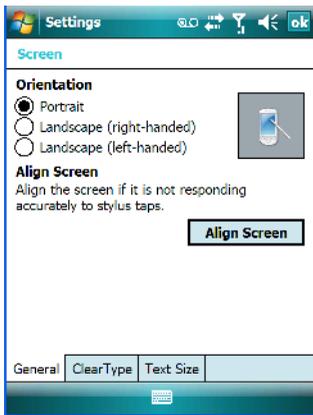
- Tap on the **Align Screen** button, and follow the directions on the screen to align (calibrate) the screen.

Note: This window provides two additional tabs: ClearType and Text Size. Tapping on the ClearType tab allows you to enable the ClearType option to smooth screen font appearance. The Text Size tab allows you to increase or decrease the size of the font displayed on the screen.

3.4.4   Screen Orientation

In addition to screen calibration, the *Screen* icon allows you to determine how your screen will be oriented – *portrait* or *landscape (right- or left-handed).*

*   Tap on **Start>Settings>System** tab.
*   Tap on the **Screen** icon.
*   In the **General** tab, tap on the orientation that best suits the way in which you use your Ikôn.

3.5   Ikôn Indicators

The Ikôn uses LEDs (Light Emitting Diodes), onscreen messages and audio tones to indicate the various conditions of the Ikôn, the batteries, the scans and so on.

3.5.1   LEDs

Three LEDs are located on the upper-left side of the Ikôn, just above the display. When you press the Power button, the LED flashes yellow to indicate that the Ikôn has been powered up. The LED table following outlines the behaviour of the LED while the Ikôn is docked in a charger.

Keep in mind that the application running on the Ikôn can dictate how the application LED operates. Review the documentation provided with your application to determine LED behaviour.

Table 3.1   Function Of Ikôn LEDs

LED	Function
Green Charge LED (left-most LED)	Charge indicator. See the table below for descriptions of Charge LED behaviour.
Yellow Application LED (centre LED)	Application LED. This LEDs behaviour is application dependent.
Blue Radio Power LED (right-most LED)	Radio power indicator.

If the Ikôn is attached to an external power supply, the charge LED (the left-most LED) reflects the battery charge status.

Table 3.2   Ikôn Charge LED Behaviour

LED Behaviour	Charge Status
Solid Green	Charge complete
Slow Blinking Green (LED *off* longer than *on*)	Charge in progress. Battery charged to less than 80% capacity.
Long Blinking Green (LED *on* longer than *off*)	Battery charged to greater than 80% capacity.
Fast Blinking Green (LED switches on and off rapidly)	Charge failure. (Defective battery or battery outside temperature range (0° C to 50° C))

Note: When the Power button is pressed, the yellow LED will flash to let you know that the PDA is powered up. You can go ahead and release the Power button.

3.6   Audio Indicators

The audio speaker provides a variety of sounds when a key is pressed, a keyboard character is rejected, scan input is accepted or rejected, an operator's entry does not match in a match field or the battery is low. To specify how you want your Ikôn to respond under various conditions, refer to "Sounds" on page 143.

3.6.1   Adjusting Speaker Volume

The *Volume* button is located on the left side of the Ikôn, just below the *Scan* button. It is a rocker button; pressing the top half of the button increases volume while pressing the bottom half of the button decreases it.

3.7   Monitoring The Battery And Maximizing Run Time

Note: When the battery is at 50% capacity, a 'low battery' warning is displayed. When the battery is at about 10% capacity, a 'very low battery' notification bubble appears.

As Lithium-Ion batteries age, their capacity decreases gradually, and they are generally considered depleted after approximately 2 years of use (less than 60% of original capacity remaining). Keep in mind however that heavy usage or operating the Ikôn at temperature extremes will shorten the battery life.

Lithium-Ion batteries do not require conditioning cycles and the Ikôn battery system (including chargers) requires no user interaction to maintain peak performance.

To maximize the run time of your batteries, consider the following:

- The display backlight is a large drain on the battery. Try to keep its brightness as low as possible.

- The Ikôn is 'event' driven—that is, when it is not in use, the Ikôn reverts to *sleep* mode (even when it appears to be running), saving battery power. Events include a key press, touchscreen taps and scan triggers. Power consumption is reduced if you avoid unnecessary events, and allow the Ikôn to sleep as much as possible.

- The battery is a 'smart battery' with built-in intelligence.

Tapping on the *Power* icon under *Start>Settings>System* tab displays a dialog box that provides detailed information about the battery status of the battery installed in your Ikôn.

- When the Ikôn is switched off, it goes into a low-power, suspend state but continues to draw a small amount of power from the battery. This should not be an issue unless the Ikôn is left in suspend state for more than a week—for long-term storage, the battery should be removed.

3.7.1   Storing Batteries

Long term battery storage is not recommended. If storage is necessary:

- Always try to use a 'first-in first-out' approach to minimize storage time.

- Lithium-Ion batteries age much faster at elevated temperatures. Store batteries at temperatures between 0° C and 20° C.

- Always charge batteries to at least 40 to 60% before storing them. Batteries can be damaged by an over-discharge phenomenon that occurs when an empty battery is stored for a long period of time such that the cell voltage drops below a lower limit.

- To minimize storage degradation, recharge stored batteries to 40 to 60% every 4 or 6 months to prevent over-discharge damage.

- A 'never used' Lithium-Ion battery that has been stored for 3 years may have limited or no useful life remaining once put into service. Think of batteries as perishable goods.

3.8   Uploading Data In A Docking Station

⚠️ ***Important: Review the documentation provided with the user application installed in
your Ikôn before performing data uploads.***

The desktop docking station and quad docking station are typically used to upload transaction data to a server computer when a radio link is not available.

📖 *Note: Refer to "Chargers And Docking Stations" on page 252 for more details.*

The desktop docking station can complete batch uploads to a Client USB connected PC or
server. An optional 10/100baseT Ethernet module is also available.

Unlike the desktop docking station, the quad docking station supports only TCP/IP connections to a PC or server through a 10/100baseT Ethernet connection.

When an Ikôn is properly inserted in a docking station, a dock icon is displayed in
the navigation bar at the top of the screen. The Ikôn also detects the presence of the
Ethernet network.

3.9   *Bluetooth* Radio

📖 *Note: Integrated Bluetooth radios are standard on Ikôn units. Keep in mind also that Bluetooth is available simultaneously with WAN and 802.11g on a single Ikôn.*

The Ikôn is equipped with an on-board *Bluetooth* radio. This type of radio enables short
range data communication between devices. The Bluetooth also provides the capability to
use a *Bluetooth*-enabled cellular phone as a data modem, exchanging information with other
Bluetooth devices. Refer to "The Bluetooth GPRS Phone" on page 206 for setup details.

3.9.1   Pairing A *Bluetooth* Headset

📖 *Note: Headset pairing information is also available in the **Getting Started Centre** in the
Today screen on your Ikôn.*

Before pairing a headset or any other *Bluetooth* device with your Ikôn, make certain that
the *Bluetooth* device power is enabled; it is *enabled* by default. If, for some reason, it has
been disabled:

- Tap on **Start>Settings>System tab** and then, tap on the **Power icon** to display the *Power* dialog box.
- Tap on the **Built-in Devices tab**, and tap in the checkbox next to **Enable Bluetooth**.
- Next, tap on **Start>Settings>Connections tab>Bluetooth icon**.
- Tap on the **Mode tab**, and check **Turn on Bluetooth**. Tap **OK**.
- Turn your headset on and place it within a few feet of your Ikôn.
- If needed, set your headset to visible so that the Ikôn can detect it and establish a connection.

Most headsets are in pairing mode by default. If this is not the case, follow the headset manufacturer's instructions to place the headset in pairing mode.

- Tap on **Start>Settings>Connections tab>Bluetooth icon**.
- In the *Devices* tab, tap **Add new device**. Wait for the Ikôn to scan for devices.
- Choose the **headset device** from the list and tap on **Next**.

If the headset has authentication enabled, the Ikôn then prompts you to provide a passcode.

- Type the **passcode** (or PIN – Personal Identification Number), and then tap on **Next**.

The Ikôn then displays a list of services. Choose the *Hands Free* service. (If you are attempting to pair another device, choose it from this list.)

- With *Hands Free* checked (enabled), tap **Finish**. The headset is now paired.

3.10   Inserting The microSD And SIM Card

There are two card holders available in the battery compartment of the Ikôn – the left-hand holder is provided for a microSD (micro Secure Digital) and the right-hand holder is for a SIM (Subscriber Identity Module) card.

The microSD cards provide additional non-volatile memory to your Ikôn. SIM cards provide access to the voice option, the Internet, and so on.

3.10.1   Inserting The Cards

- Switch off the Ikôn – press and hold down the **Power** button, and when the *Shutdown* screen is displayed, choose **Shutdown** and tap on **OK**.
- Remove the battery cover and the battery.
- Pull the SD door down as the arrow icon on the door indicates.
- Orient the microSD or SIM card according to the legend stamped into the plastic. the SD and SIM doors have guides or rails into which you can slide the card

- For microSD, slide the card into the guides in the microSD door on the left-hand slot.
- For SIM cards, slide the card in the right-hand slot.
- Slide the protective door back into place, and snap it shut.

3.11 The Camera

A built-in digital camera is available for the Ikôn. This option allows you snap still photographs or create short video clips. The *Pictures & Videos* applet is used to access and configure the camera. For more details about the camera, refer to "Pictures & Videos" on page 101.

3.12 General Maintenance

3.12.1 Caring For The Touchscreen

The top of the touchscreen is a thin, flexible polyester plastic sheet with a conductive coating on the inside. The polyester can be permanently damaged by harsh chemicals and is susceptible to abrasions and scratches. Using sharp objects on the touchscreen can scratch or cut the plastic, or crack the internal conductive coating.

The chemicals listed below must not come into contact with the touchscreen:

- sodium hydroxide,
- concentrated caustic solutions,
- benzyl alcohol, and
- concentrated acids.

If the touchscreen is used in harsh environments, consider applying a disposable screen protector (model number CH6110). These covers reduce the clarity of the display slightly but will dramatically extend the useful life of the touchscreen. When they become scratched and abraded, they are easily removed and replaced.

3.12.2 Cleaning The Ikôn

⚠️ *Important: **Do not immerse the Ikôn in water. Dampen a soft cloth with mild detergent to wipe the unit clean.***

- Use only mild detergent or soapy water to clean the Ikôn unit.

- Avoid abrasive cleaners, solvents or strong chemicals for cleaning. The plastic case is susceptible to harsh chemicals. The plastic is partially soluble in oils, mineral spirits and gasoline. The plastic slowly decomposes in strong alkaline solutions.
- To clean ink marks from the keypad or touchscreen, use isopropyl alcohol.

WORKING WITH WINDOWS MOBILE 6.1 4

4.1   Navigating In Windows Mobile 6.1 And Applications

Graphic user interfaces like Windows Mobile 6.1 for portable devices or desktop Windows (2000, XP, etc.) utilize 'point and click' navigation. On the Ikôn, this is accomplished using a touchscreen and stylus rather than a mouse.

4.1.1   Navigating Using A Touchscreen And Stylus

Note: If the touchscreen is not registering your screen taps accurately, it may need recalibration. Refer to "Aligning (Calibrating) The Touchscreen" on page 45.

A touchscreen is a standard feature on all Ikôns. Each is equipped with a stylus–a pointing tool –stored in a slot at the bottom of the unit.

• Use the stylus to tap on the appropriate icon to open files and folders, launch applications and programs, make selections, and so on.

4.2   Windows Mobile 6.1 Desktop-Today Screen

Keep in mind that if your Ikôn is running Windows Mobile 6.1 Professional, the *Today* screen will offer Phone connectivity in the *Navigation Bar* at the top of the screen and a *Phone* softkey in the *Softkey Bar* at the bottom of the screen. Units running Windows Mobile 6.1 Classic provide a *Calendar* option in the *Softkey Bar*; phone options are not available with this version of Windows Mobile 6.1.

Windows Mobile 6.1 Classic

Windows Mobile 6.1 Professional

The *Today* screen displays all your important information–tasks, unread e-mails and upcoming appointments–all in one place. The *Start* menu provides access to everything else you'll need.

4.2.1 Windows Mobile 6.1 Navigation Bar

The navigation bar along the top of the screen provides icons that, when tapped, open their associated programs. If you're unit is equipped with *Windows Mobile 6.1 Professional*, you'll be see a *Phone* hotkey for quick access to phone settings.

Windows Mobile 6.1 Classic Navigation Bar

Windows Mobile 6.1 Professional Navigation Bar
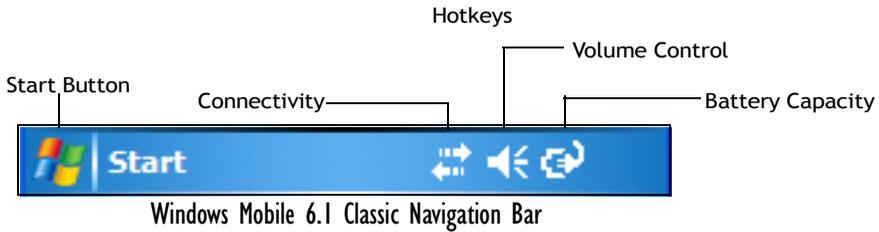
Note: When a peripheral is attached to the docking/usb port of the Ikôn, an associated icon is displayed briefly in the navigation bar to indicate that the Ikôn has recognized the connection.

Start Button

Tapping on the **Start** button displays the *Start* menu.

Connectivity

The *Connectivity* hotkey provides a shortcut to the *Connections* tab in the *Settings* window. This tab provides access to Bluetooth, network, network card and internet connection setups.
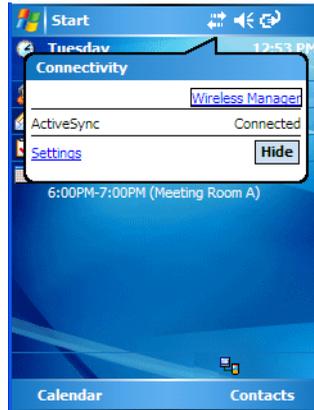
Phone Settings

If your Ikôn is running *Windows Mobile 6.1 Professional*, it is equipped with a phone option. An Ikôn in which a SIM card and GSM radio are installed can access phone settings along with the Wireless Manager from this pop-up bubble. Any active connections are also listed here.

Volume Control

Tapping on this icon displays a sliding tab that allows you to adjust the speaker volume or turn the speaker on and off.

On units running *Windows Mobile 6.1 Professional*, two volume adjustments are provided – one for the speaker volume and the other for the phone dialer volume.

Phone Dialer Volume

Windows Mobile 6.1 Classic
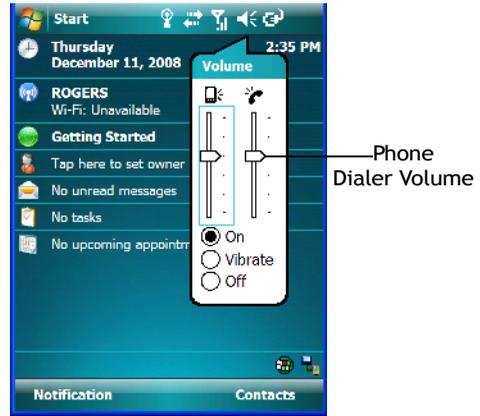
Windows Mobile 6.1 Professional

Battery Capacity

Tapping on the *Battery* hotkey displays the Battery tab allowing you to view the remaining battery capacity in the battery.
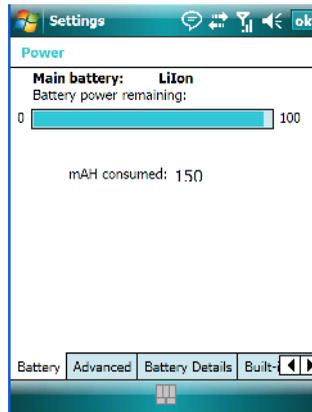
4.2.2   Today's Date, Clock And Alarm

This option displays the current date. If you need to adjust the date or set an alarm:

• In the *Today* screen, tap on **today's date**.

The *Clock & Alarms* screen is displayed.
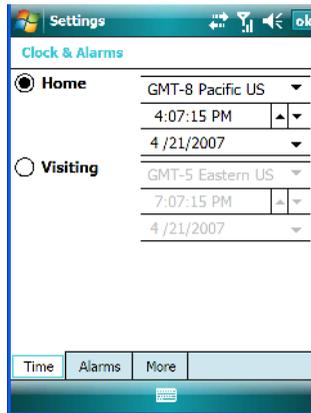
• Tap on the dropdown menu arrows to set the GMT, time and date.

An option to set the date and time for a visiting time zone is also available.

To set an alarm:

• Tap on the **Alarms** tab.
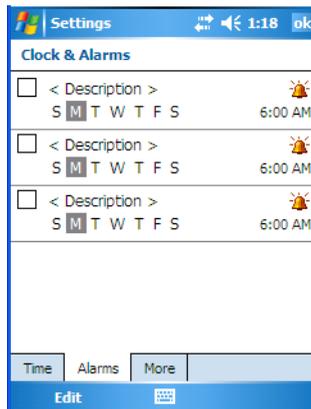
You can set a maximum of three alarms.

• Tap in the **checkbox** to enable an alarm.

- Tap the **day** on which you want the alarm to go off – **Sunday** through **Saturday**.
- Tap on the **time** to display the clock.
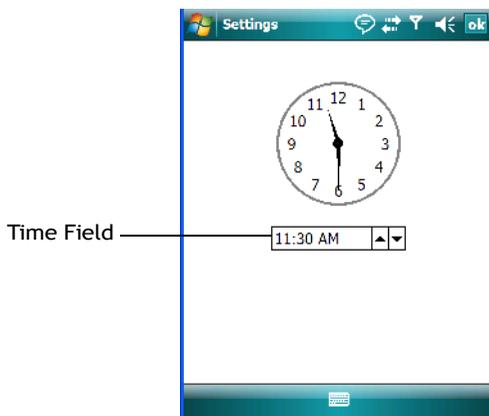
Time Field ──────────

- To set the time, in the *time* field below the clock, tap on the **hour** to highlight it, and type the hour at which you want the alarm to ring. To set the minutes, highlight the **minutes**, and type the appropriate minutes, *or*

  You can also assign the alarm activation time using the clock graphic. Position the stylus on the **hour hand** of the clock, and drag it to the correct hour. Do the same for the **minute hand**.

- Tap on **OK** to save your changes.

Note: Tapping on the 'More' tab displays a dialog box in which you can choose to 'Display the clock on the title bar in all programs'.

4.2.3   Ownership Information

This option allows you to add your personal information to the Ikôn. Some of this information will be displayed in the desktop *Today* screen.

- Tap on **Owner**, listed in the *Today* screen as *Tap here to set owner information* to display a screen in which you can type information.

- Type your **name, company name, address, telephone number** and **e-mail address**.

Note: You can type information using the Ikôn keyboard, or you can tap on the soft keyboard icon in the bottom right corner of the softkey bar to display an onscreen keyboard.

The *Ownership* screen has two additional tabs–*Notes* where you can add any pertinent, additional information and *Options* where you can specify whether you want the desktop to display your 'identification' information or your 'note' information.

4.2.4 E-mail Notification

If you have any e-mail, it will be indicated in the *Today* desktop screen. To view your e-mail, tap on the **E-mail notification** option represented by an icon in the shape of an envelope.

Refer to "Messaging" on page 110 for details about setting up your Inbox.

4.2.5 Task Notification

Tasks lets you create lists of entries representing your responsibilities, upcoming projects, and so on. If you've assigned any tasks, this option lets you know how many active tasks you have.

Note: You can synchronize the Task Notification option using ActiveSync so that any tasks are displayed on your Ikôn as well as your PC. Refer to "Synchronization" on page 85 for details.

• Tap on the **Tasks** option to display a list of tasks.
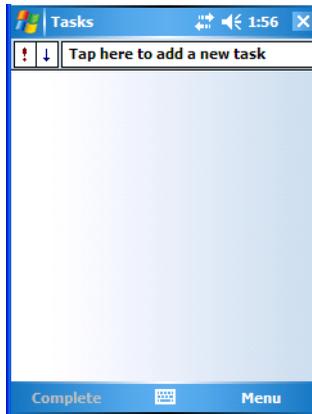
Creating A Task

• Tap in the field labelled **Tap here to add a new task**. The text is replaced with a blink-ing cursor. If you prefer to type the task using the soft keyboard, tap on the *soft keyboard* icon in the softkey bar.

• Type your task description.

• Tap anywhere in the blank part of the screen, or press [ENTER] to add the task to your list.

Editing A Task

• Tap on a **task** in the task list to highlight it. Tap **Edit** in the softkey bar at the bottom of the screen to display a detailed task screen where you can define task characteristics.

Figure 4.1 Task Details Screen
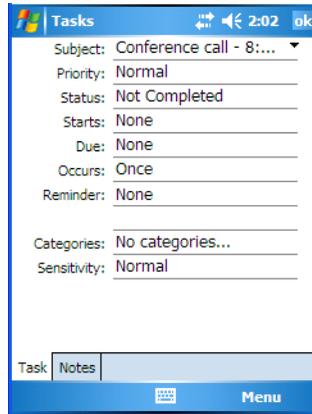
Each of the nine items in this screen, when tapped, displays a dropdown menu where you can choose from a list of options.

• Once you've completed all the appropriate fields, tap on **OK** to save your changes.

Note: You can also tap on the Notes tab to add additional information about the task your are defining.

The task will be listed in the *Today* screen as an *Active Task*.

Deleting A Task

• Press and hold the stylus on a task until a pop-up menu is displayed.

• Tap on **Delete Task**.

Marking A Task As Completed

• In the **Tasks** list, tap the **checkbox** next to the items that are completed.

Sorting Tasks

• In the **Tasks** list, tap on the **Menu** option in the lower-right corner of softkey bar, and tap on **Sort By**.

You can choose from **Status, Priority, Subject, Start Date** or **Due Date**. The tasks are arranged in the list according to the criterion you chose.

Limiting The Tasks Displayed In The Task Screen

• Tap on **Menu** in the lower-right corner of softkey bar, and tap on **Filter**.

You can choose **All Tasks, Recently Viewed, No Categories, Active Tasks**, or **Completed Tasks**. The tasks are displayed on the screen according to the preference you chose.

4.2.6   Calendar Of Upcoming Appointments

This option is used to map out all your upcoming appointments, meetings and so on in the weeks, months and years ahead.

Note: You can synchronize the Calendar using ActiveSync so that any meetings, appointments and so on are displayed on your Ikôn Today screen as well as on your PC. Refer to "Synchronization" on page 85 for details.

• Tap on the **Upcoming Appointments** option in the Today screen, or tap on **Start>Calendar** to display the calendar.

If your unit is running *Windows Mobile 6.1 Classic*, you can tap on **Calendar** in the *Softkey Bar*.
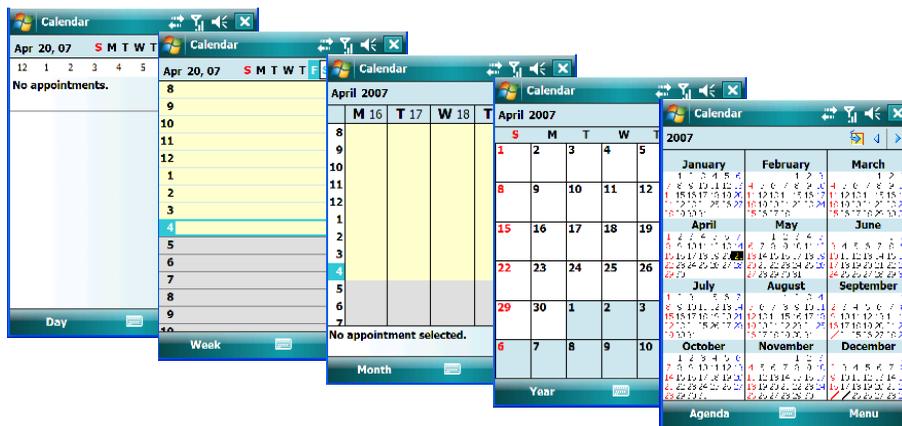
The default calendar displays an *Agenda* of appointments for the week, divided into days. You can choose to leave the calendar as is, or you can tap on the *Day* softkey to reflect the *Week, Month* or *Year*.

4.2.6.1   Creating And Editing Appointments

• In the *Calendar* screen, tap on **Menu** in the softkey bar, and then tap on **New Appointment**.

Figure 4.2 Appointment Detail Screen
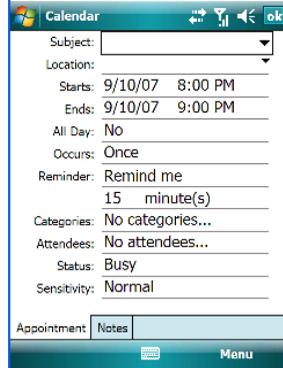
- In the *Subject* field, name the appointment.

- Complete the remaining fields to reflect your appointment details.

Note: Refer to "Adding Reminders" on page 67 for details about reminders. Refer to "Using Categories" on page 68 for information about this option.

- Tap on **OK** to save your changes and close the screen.

4.2.6.2 Adding Reminders

If you want to be reminded in advance of an appointment:

- In the *Reminder* field, choose **Remind me** from the dropdown menu.

- In the second *Reminder* field, tap on the number in the field to display a dropdown menu where you can define a numeric value of 1, 5, 10, 15, 30. Tap on **minute(s)** to display a dropdown menu from which you can choose the time unit for your reminder– minute(s), hour(s), day(s) or week(s).

- Tap **OK** to finish. You are returned to the view you were in before adding the reminder.

• Tap the appointment in the **Calendar** screen to display it in a summary screen. The reminder is indicated by the small, bell icon.
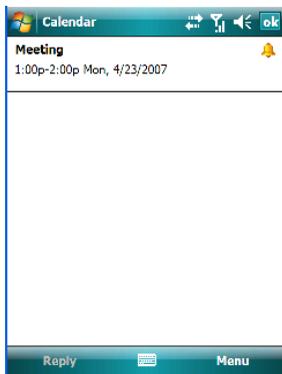
4.2.6.3 Using Categories

Categories help you organize and track the different types of data you keep on your Ikôn.

To assign an appointment to a category:

• Tap on an **appointment** in the *Today* screen. In the *Calendar* screen, tap on the **appointment** again.

• Tap the **Categories** field to display the *Categories* screen.
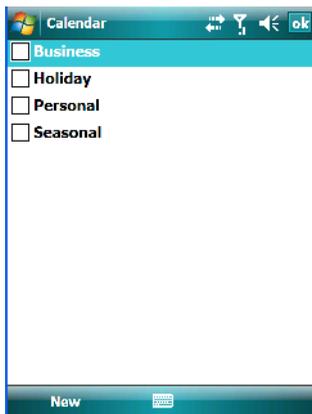
• Tap in the **checkbox next to the category** to which you want to assign the appointment.

• Tap **OK**. Your appointment is assigned to the category or categories you chose.

*Note: You can create a new category by tapping on **New** in the softkey bar at the bottom of the screen.*

4.2.6.4 Deleting Appointments

- Tap and hold the stylus on the **appointment** you want to delete.
- Tap on **Delete Appointment** in the pop-up menu.

4.3 Start Menu

To display the Start menu:

- Tap on the **Start** button in the upper-left corner of the *Navigation Bar*.

Start Button ——— Navigation Bar

Custom-chosen programs

Most recently used programs

Windows Mobile command centre

- Tap on the **Start** menu item with which you want to work.

*Note: Keep in mind that if your Ikôn is running Windows Mobile 6.1 Classic, the Phone option displayed in the sample screen above is **not** available; this option is only offered on units running Windows Mobile 6.1 Professional.*

4.3.1 Customising The Start Menu

You can choose the items you want to appear in the *Start* menu – items you use most often.

• Tap on **Start>Settings**.
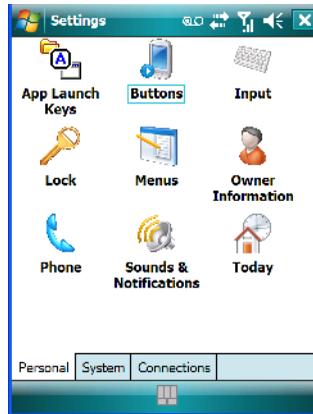
• In the *Personal* tab, tap on the **Menus** icon.
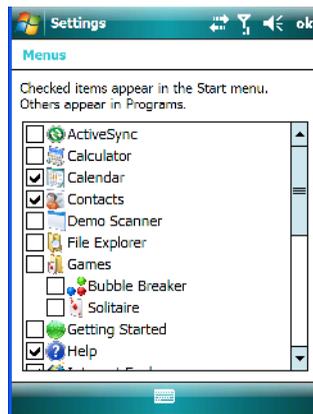
• Tap the **checkboxes** next to the items you would like to appear in your *Start* menu. When you've completed your selections, tap on **OK**.

4.4   Managing Files And Folders

Windows Mobile 6.1 files are stored in folders and sub-folders that are accessible with File Explorer. You can open, save, rename, copy and paste files in the same manner as you would on any desktop PC.

- Tap on **Start>Programs>File Explorer**.

Tap to display sorting options

Tap to display additional storage/files

Files stored here automatically

Tap to move back one level
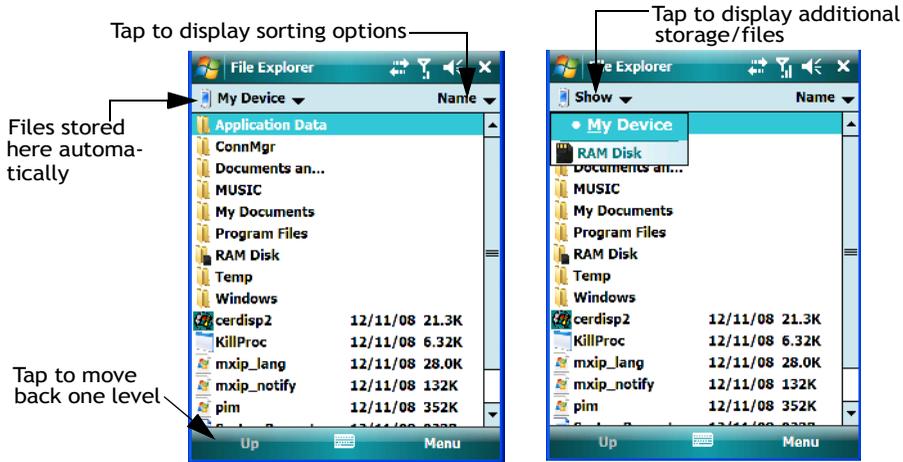
4.4.1   Creating A New Folder

- Tap **Start>Programs>File Explorer**.
- Tap **Menu>New Folder** in the softkey bar at the bottom of the screen.
- Use the Ikôn keyboard or the soft keyboard to assign a name to the folder.

4.4.2   Renaming A File

- Press and hold the stylus on the file you want to rename. A ring of dots is displayed followed by a pop-up menu.
- Tap **Rename**. The file name is highlighted. Type a new name.

4.4.3   Copying A File

- Press and hold the stylus on the file you want to copy. A ring of dots is displayed followed by a pop-up menu.
- Tap on **Copy** in the pop-up menu.
- Navigate to the location where you want to copy the file.
- Press and hold the stylus in a blank area of the screen—away from other icons—until a pop-up menu is displayed.
- Tap Paste to copy the file to the new location.

4.4.4   Deleting A File

- Press and hold the stylus on the file or folder you want to delete until a pop-up menu is displayed.
- Tap **Delete** to remove the file.

4.5   Using Menus

In *Windows Mobile 6.1 Classic* and *Professional*, the menu is located in the *softkey bar* at the bottom of the screen.

Softkey Bar ————   ———— Menu
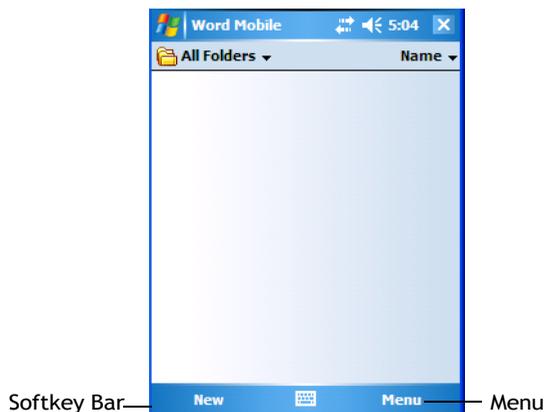
To execute a command:

- Tap on **Menu** to display the commands associated with it, and then tap on the command you want to execute.

4.5.1   Pop-Up Menus

Pop-up menus are available in many screens and programs. They offer quick access to a group of useful commands in addition to those available in the menu bar. To display a pop-up menu:

- Gently press and hold the stylus on the screen. A ring of dots is displayed on the screen followed by a pop-up menu.
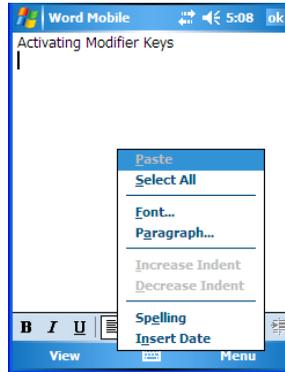
- Tap on the **command** you want to execute.

4.6 The Softkey Bar

The Ikôn is equipped with a *softkey bar* at the bottom of the screen. It displays *softkeys* that allow you to access menus and commands. It also displays the *soft keyboard* icon.
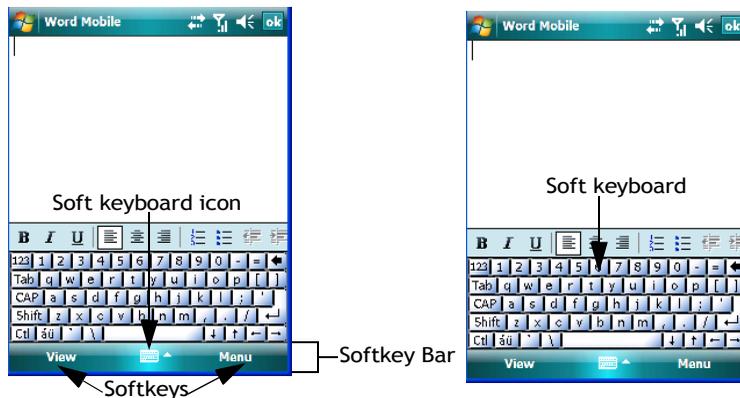
Softkeys

Tapping on a softkey displays information associated with the softkey–for example, in the sample screen above, the *Menu* softkey displays the commands associated with Word Mobile. The *View* softkey lets you to tailor how the Word document will be displayed.

The Soft Keyboard Icon

Tapping on the *soft keyboard* icon displays an onscreen keyboard you can use as an alternative to the Ikôn keyboard.

Shift-State Indicator Icon

The softkey bar can also display the shift-state indicator icon. This icon indicates active modifier keys–[SHIFT], [ALT], [CTRL], [ORANGE] and [BLUE].

• Tap on **Start>Settings>Buttons>One Shots**. Tap in the checkbox next to *Show modifier key state,* to replace the *soft keyboard* icon with the *shift-state indicator* icon.
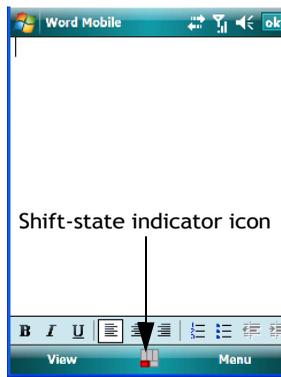
When a modifier key is pressed, it is displayed in the *shift-state indicator* icon. In the example above, the [ORANGE] key was activated.

To distinguish a 'locked' modifier key – a key that has been locked 'on' – from a modifier key that is only active until the next key is pressed, 'locked' keys are encircled in a black frame in the *shift-state indicator* icon. Refer to "Activating Modifier Keys & The Shift-State Indicator" on page 40 for details.

Note: You can still access the soft keyboard while the shift-state indicator icon is displayed. Tapping on this icon displays the soft keyboard. Tapping on the shift-state indicator icon again removes the soft keyboard.

4.7   Programs – Using Applications

• Tap **Start>Programs** to display the programs installed on your Ikôn.

Figure 4.3 Program Screen Icons
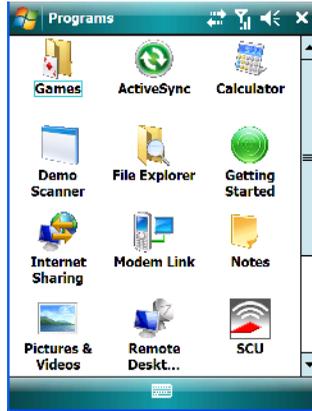
Opening An Application

• Tap on a **Program icon** to launch the associated program.

Minimizing An Application

• Tap on the **X** button in the upper-right corner of an application screen to minimize the application.

*Note: Although it looks like a Close button, this button does **not** close the application–it only minimizes it.*

Opening, Closing And Switching Applications

- Tap on **Start>Settings**. Tap on the **System** tab and then the **Task Manager** icon – the *Task Manager* screen is opened.
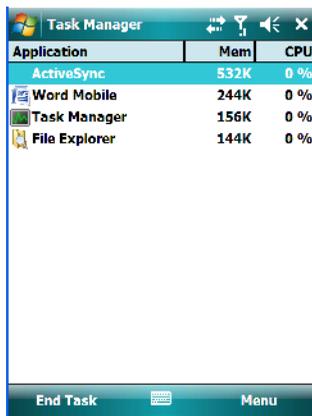
The *Task Manager* screen lists all running tasks (applications). This applet provides a number of options to manage your opened applications.

- **End Task:** To shut down an application, **highlight the program** in the list, and tap on the **End Task** softkey in the taskbar at the bottom of the screen.
- **End All Tasks:** To shut down *all* applications, tap on the **Menu** softkey, and choose **End All Tasks**.
- **Switch To:** To make an application listed in this screen active, highlight the application, and tap on **Menu>Switch To**.

For additional information about the *Task Manager*, refer to "Task Manager" on page 171.

4.8   Settings

- Tap **Start>Settings** to display the setting options for your Ikôn.

Figure 4.4 Settings Icons

Settings are divided into three tabs – *Personal, System* and *Connections*. Refer to Chapter 6: "Settings" for details about the options available to you.

4.9 Help

Tapping on the *Help* option displays a screen of help topics that are content-specific; if for example, the *Today* screen is displayed and you tap on *Start>Help*, the help screen will provide topics about the *Today* screen. You can perform a help content search by tapping on the *Contents* or *Search* softkeys. Keep in mind that help is not always available.
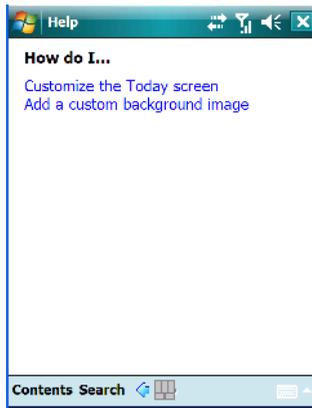
4.10 Entering Text

Note: For additional information about tailoring text entry using the soft keyboard, the transcriber, the block recognizer and the letter recognizer, refer to "Input" on page 133.

You can enter text using either the soft keyboard or the Ikôn keyboard. You can also use the Transcriber to handwrite information directly on the touchscreen using your stylus.

• Open an existing document or create a new one– tap **Start>Office Mobile>Word Mobile** and tap on **New** in the softkey bar to create a new document.

If you're using the Ikôn keyboard to enter text, there are no special steps. Just begin typing – the text, spaces, etc. will appear in the document.

4.10.1 Soft Keyboard

The *soft keyboard* is laid out just like the keypad on a PC keyboard. By tapping the stylus on letters and modifier keys like the [SHIFT] key, you can enter text in a document.

Soft Keyboard
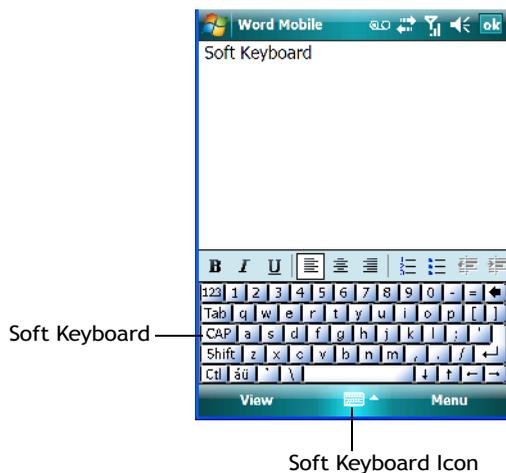
Soft Keyboard Icon

If the soft keyboard is not already displayed:

• Tap on the **soft keyboard icon** in the softkey bar.
• Tap on the keys in the soft keyboard to enter text in your document.

To switch to a numeric keyboard:

• Tap on the **123** key in the upper-left corner of the soft keyboard.
• Tap on this key again to return to the standard keyboard.

4.10.2 The Transcriber

To access the *Transcriber*, with your document opened:

- Tap on the **arrow** next to the keyboard icon, and choose **Transcriber** from the pop-up menu.

- Review the introductory screen. It provides some shortcut symbols you can draw on your screen to work with the *Transcriber*.

- When you've finished reading the introductory screen, tap **OK**.

The *Transcriber* menu and icon bars are displayed at the bottom of the document.

Figure 4.5 Transcriber Screen

Transcriber Icon

- Use your stylus to write a few words anywhere on the screen.

After a few seconds, your words are recognized (or not) and are transcribed into typed text.

Note: Character recognition is more successful if you write using large letters.

Editing Text Within The Transcriber

With your document open, make certain that you are in *transcriber* mode–the *Transcriber* icon should be displayed in the lower-right corner of the softkey bar.

- Double-tap to select a word or triple-tap to select a paragraph, ***or***

   Draw a line through the text you want to select and wait a few seconds until the Transcriber highlights the text.

- Once the text is highlighted, write the new text that is to replace the highlighted information, ***or***

Press and hold the stylus on the selected text to display a pop-up menu. Choose **Cut, Copy, Paste** or **Clear** (delete).

Note: You can also use the softkey bar tools or the shortcuts listed in the introductory screen to help you edit a document within the Transcriber.

4.10.3 Block Recognizer And Letter Recognizer

While the *Transcriber* attempts to recognize natural handwriting and transcribe it, *Block Recognizer* and *Letter Recognizer* attempt to teach you how to conform your handwriting to what the Ikôn can recognize.

Block Recognizer

• Open a document, and tap on the arrow next to the *input* icon. Choose **Block Recognizer**.

Input Panel — Recognizer Icon Bar — Input Icon
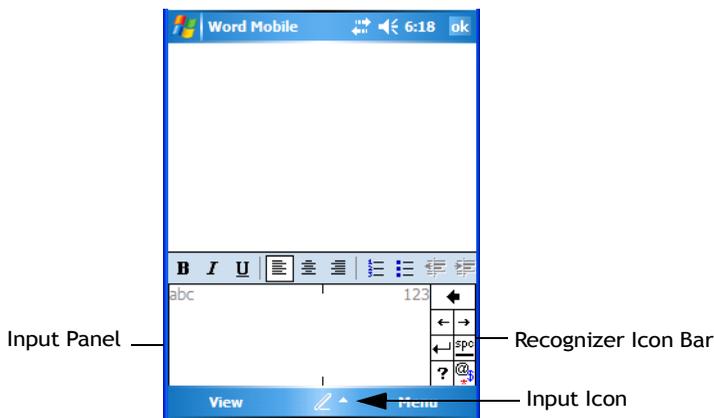
There are two points to remember when using Block Recognizer. First, limit your writing to the *Block Recognizer input panel*–do not write in the body of the document. Second, write only *uppercase letters* with your stylus.

• Tap on the ? icon in the *Recognizer Icon Bar* to display the *Character Recognizer* screen. This screen provides a visual demonstration of how to enter letters that will be recognized. Tap on a character in the soft keyboard for a demonstration of how to form a recognizable letter.

• In the *Block Recognizer* panel, write letters to the left (abc) and numbers to the right (123) on the input panel. *Remember to write using uppercase letters*–they will be printed on the screen as lowercase unless you follow the step below to create an upper-case letter.

- To create an uppercase character, draw a line straight up the 'abc' panel.
- Use the *Recognizer Icon Bar* to move around the screen, add spaces, special characters, and so on.

Letter Recognizer

- Open a document, and tap on the arrow next to the *input* icon. Choose **Letter Recognizer**.
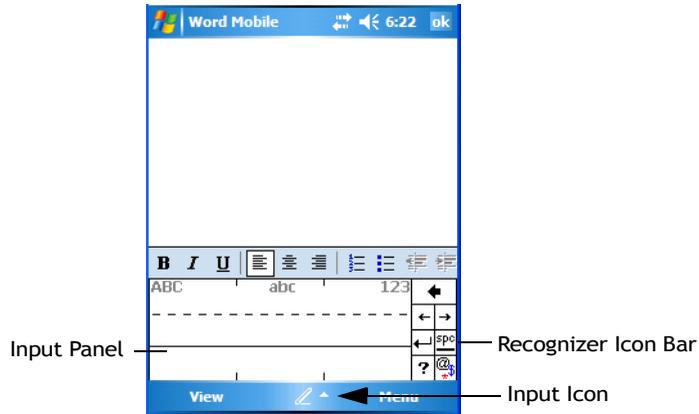
There are two points to remember when using *Letter Recognizer*. First, limit your writing to the ***Letter Recognizer Input Panel***–do not write in the body of the document. Second, write only ***lowercase letters*** with your stylus.

- Tap on the ? icon in the *Recognizer Icon Bar* to display the *Character Recognizer* screen. This screen provides a visual demonstration of how to enter letters that will be recognized. Tap on a character in the soft keyboard for a demonstration of how to form a recognizable letter.
- To create an uppercase character, write a lowercase letter on the left side (ABC) of the input panel.
- To create a lowercase character, write a lowercase letter in the middle (abc) of the input panel.
- Write numbers on the right side (123) of the input panel.

5 PROGRAMS

5.1   Programs

The *Programs* menu provides access to all the applications available on your Ikôn.

•   Tap on **Start>Programs** to display this screen.

Tapping on an icon in this screen launches the associated applet.

Figure 5.1 Programs Tabs
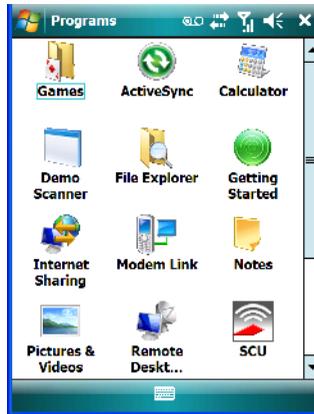
5.2   Games

Your Ikôn is equipped with a few standard games–Bubble Breaker and Solitaire–should you feel the need to pass the time.

5.3   ActiveSync®

For PCs using the Microsoft Windows XP operating system, ActiveSync® – Microsoft PC connectivity software–can be used to connect the Ikôn to PCs running this software. By connecting the Ikôn to a PC through your desktop docking station and running ActiveSync on the PC, you can view Ikôn files, drag and drop files between the Ikôn and the PC, connect to the Internet, and so on.

ActiveSync can be installed from the *Getting Started CD* included with your Ikôn. Refer to "The Getting Started CD" on page 13 for details.

5.3.1   Synchronization

For details about synchronizing your PC with you Ikôn, visit the following Microsoft internet site:

http://www.microsoft.com/windowsmobile/activesync/default.mspx

5.4   Calculator

Tapping on *Start>Programs>Calculator* displays a standard calculator.

•   Use your stylus to tap the calculator buttons.

5.5   Demo Scanner

The *Demo Scanner* icon is used to test how the Ikôn reads and writes bar codes. The *Demo Scanner* dialog box contains buttons at the bottom of the dialog box that allow you to *Scan*, *Reset* or change bar code *Setting*.

5.6   Office Mobile

This icon contains the following abridged Microsoft programs: *Excel Mobile*, *OneNote Mobile*, *PowerPoint Mobile* and Word Mobile. Keep in mind that if *Office Mobile* is listed in your *Start* menu, this icon will not be displayed in the *Programs* window.

5.6.1   Excel Mobile

Excel Mobile is an abridged version of Microsoft Excel, an electronic spreadsheet program. If you're familiar the Excel application on your PC, you'll be able to navigate *Excel Mobile*.

In addition to providing the tools to manipulate text and numeric values like statistics, percentages, using formulas that perform calculations, and so on, this program can also include graphics such as pie charts.

Excel Mobile allows you to copy Excel workbooks from your PC onto your Ikôn and update them while you're away from your desk.

•   Tap on **Start>Programs>Office Mobile>Excel Mobile**.

If *Office Mobile* is listed in your *Start* menu, tap on **Start>Office Mobile** and then tap on **Excel Mobile**.

•   If a list of workbooks is displayed rather than a new sheet, you'll need to create a new workbook. To create a workbook:

•   In *Excel Mobile*, tap the **Menu>File>New**.

5.6.1.1 Workbook Components

Columns

Address of selected text —
Entry bar

Rows —

Cell

Selected cell

Status bar —
Formula dropdown menu

Toolbar —
Sheet1 dropdown menu

Menu bar —
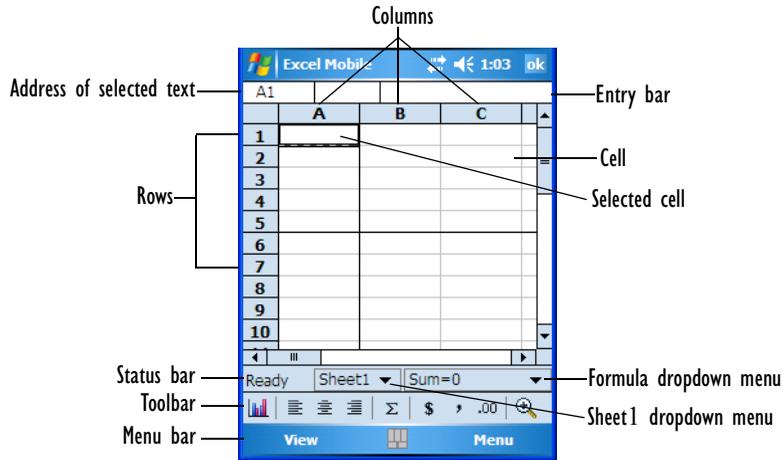
• If the toolbar is not visible, tap on the **View>Toolbar**.

You can enter data, work with rows and columns and create formulas as you would when working with Excel on your PC.

Using Excel Mobile Help

If you need help using this application, you can review the instructions in the associated help files. To display Excel Mobile help files:

• Launch the *Excel Mobile* program.
• Tap on **Start>Help**, and review the instructions provided.

5.6.2 OneNote Mobile

You can use *OneNote Mobile* to take notes wherever you are and then synchronize your notes with a notebook section in the OneNote version on your PC. For example, you can:

• Snap pictures of business cards on your Ikôn and then bring them into *OneNote* on your PC.
• Create short text notes and voice recordings on your Ikôn to remind you about important meetings, ideas, etc. and synchronize them with your notes.
• Prepare information in *OneNote* on your PC and then transfer it to your Ikôn where it will be available to you wherever you and your Ikôn go.

> ⚠️ ***Important:*** ***Remember that you must have Microsoft Office OneNote 2007 and the latest version of ActiveSync installed on your PC before you can set up a partnership between your Ikôn and your PC.***
>
> ***ActiveSync can be installed from the Getting Started CD included with your Ikôn. Refer to "The Getting Started CD" on page 15 for details.***

Setting Up A Partnership

- Start **Office OneNote** and **ActiveSync** on your PC

- Connect the Ikôn to your PC; you can use a USB cable or a *Bluetooth* connection.

When a connection is established between the Ikôn and your PC, ActiveSync displays a *New Partnership* screen.

- Choose **Standard partnership**, and tap on **Next**.

- To share information between *OneNote Mobile* and *Office OneNote 2007* on your PC, tap **Synchronize with this desktop computer**, and then tap on **Next**.

- Tap on **Finish** to begin the partnership between the Ikôn and the PC. Now you'll be able to pass notes back and forth between your PC and your Ikôn.

Creating A Note

- If *Office Mobile* is listed in your *Start* menu, tap on ***Start>Office Mobile>OneNote Mobile*** icon.

If this is not the case, tap on **Start>Programs>Office Mobile** icon. Tap on the
OneNote Mobile icon.

• Tap on **New** to create a note page. Begin typing.
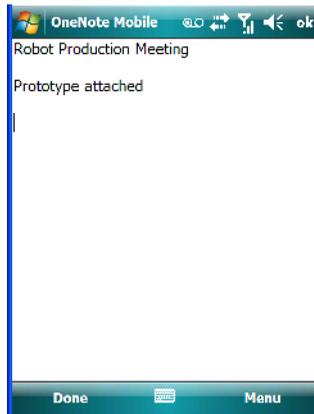
• When you complete your note, tap on **Done**.

Note: Remember that you can tap on the Menu softkey to Undo typing, add Formats (Bold,
Italic, Underline, Strikethrough), include Lists (Numbered, Bulleted, Clear)

Using The OneNote Menu

Tapping on Menu displays a list of options to help you work with the OneNote Mobile applet.
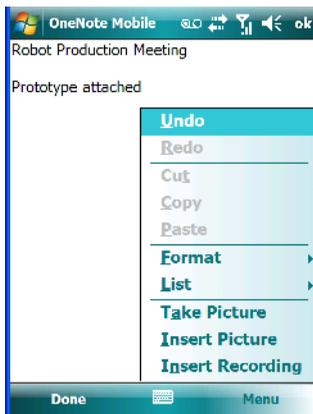
- **Undo**, **Redo**, **Cut**, **Copy** and **Paste:** These commands operate in the same way as they do in any Windows Office application.
- **Format:** Tapping on this command lists the formatting options you can apply to your note: *Bold*, *Italic*, *Underline*, *Strikethrough* and *Clear All*.
- **Take Picture:** When you tap on this option, the Ikôn switches to camera mode so that you can snap a picture to include in your note.

Press [ENTER] to snap a photo that is automatically inserted into your note.
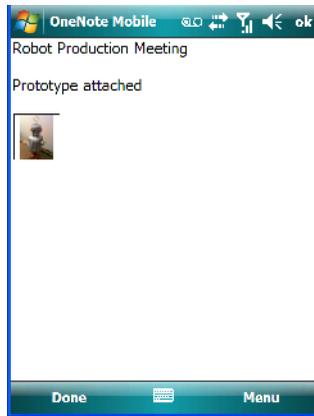
• **Insert Picture:** Tapping on this command automatically displays your *My Pictures* folder where you can tap on an existing picture to insert it into your note.
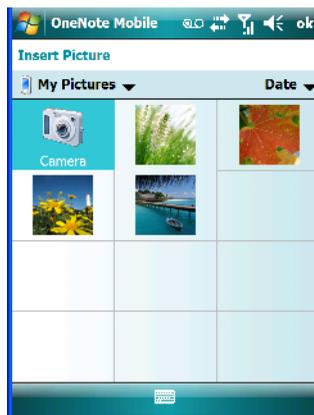
• **Insert Recording:** When you tap on this command, a recording panel is displayed.
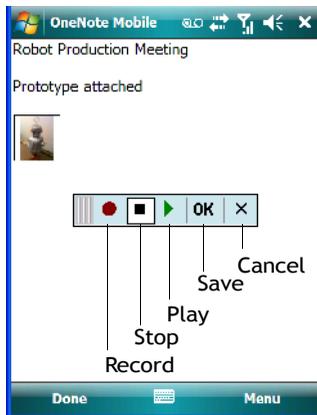
Tap on the **Record** button to *record* your message.

Tap on **Stop** when you've completed your message.

Tap on **Play** to *listen* to your voice message.

To *discard* your message, tap on **X** – the **Cancel** button.

To *save* your message, tap on **OK**. An audio icon is displayed in your note. You can tap on it to listen to your message.
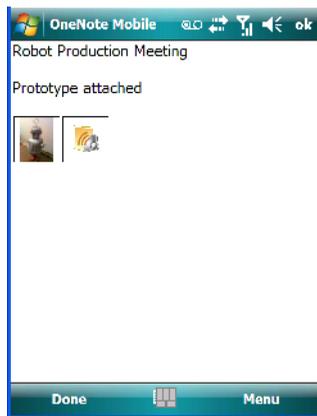
Synchronizing Ikôn One Note With PC OneNote

• Connect the Ikôn to your PC using either a USB cable or *Bluetooth*.

When the connection is complete, take one of the following steps:

- In *Microsoft ActiveSync* on your *PC*, choose **Sync**.

  or

  On your *Ikôn*, tap on **Start>ActiveSync**, and then tap on **Sync**.

During synchronization, the notes you created on your Ikôn are copied to a new Office OneNote 2007 notebook called *OneNote Mobile* on your *PC*. When synchronization is done, you can drag the transferred notes into any other sections and other notebooks on your PC.

*Note: If you prefer to synchronize Ikôn notes automatically, you can set up ActiveSync so that synchronization is continuous or occurs on a schedule. In ActiveSync on your PC, in the **Tools** menu, tap **Options**, and then tap on the **Schedule** tab.*

5.6.3   Word Mobile

If you've used Microsoft Word on your Mac or PC, Word Mobile will be familiar to you. Keep in mind however that *Word Mobile* is designed for a small screen and limited memory.

Note: Keep in mind also that a Word document created on your PC can lose key formatting features such as styles and tables if you make changes to it on your Ikôn.

- Tap on **Start>Programs>Office Mobile>Word Mobile**.

If *Office Mobile* is listed in your *Start* menu, tap on **Start>Office Mobile** and then tap on **Word Mobile**.

If you've already create a *Word* document, it will be listed in the *Word Mobile* window.
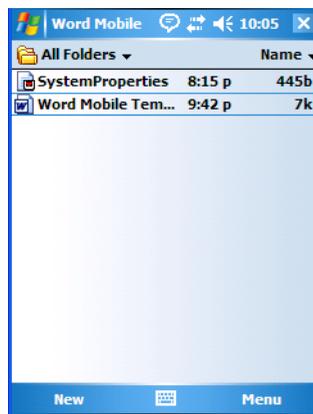
- Tap on **New** in the softkey bar to create a new Word document.

Using Word Mobile Help

If you need help using this application, you can review the instructions in the associated help files. To display Word Mobile help files:

- Launch the *Word Mobile* program.
- Tap on **Start>Help**, and review the instructions provided.

5.6.3.1 Data Entry Modes

In addition to the soft keyboard, you can enter text using Block Recognizer, Letter Recognizer or Transcriber. Refer to "Entering Text" on page 78 for details.

You can also use the Ikôn keyboard for data entry.

5.6.3.2 Sharing Documents With Your PC

Documents created on a PC are recognized by your Ikôn. However, some formatting is lost when a Word document is converted to a Word Mobile document. This loss also occurs when you open a *.doc* file and change it on the Ikôn.

> ⚠️ *Important: To avoid problems, you can work on copies of .doc files. In addition, keep in mind that you can use the Terminal Services Client program to log onto a desktop PC that is also running Terminal Services, and then you can use any program on your PC, including Microsoft Word (rather than Word Mobile). Refer to "Remote Desktop Mobile" on page 106 for details.*

5.6.4 PowerPoint Mobile

PowerPoint Mobile works just like the desktop version that may be installed on your PC. To launch this program on your Ikôn:

- Tap on **Start>Programs>Office Mobile>PowerPoint Mobile**.

If *Office Mobile* is listed in your *Start* menu, tap on **Start>Office Mobile** and then tap on **PowerPoint Mobile**.

Using PowerPoint Mobile Help

If you need help using this application, you can review the instructions in the associated help files. To display PowerPoint help files:

- Launch the *PowerPoint Mobile* program as described above.
- Tap on **Start>Help**, and review the instructions provided.

5.7 File Explorer

Windows Mobile 6.1 files are stored in folders and sub-folders that are accessible through *File Explorer*. You can open, save, rename, copy and paste files in the same manner as you would on any desktop PC.

⚠️ *Important: Refer to "Managing Files And Folders" on page 70 for details about this program.*

5.8 Getting Started

For information about the Getting Started applet, refer to "The Getting Started Centre" on page 16.

5.9 PTSI Imager Demo

📖 *Note: This icon is only available when an HHP 5000 imager is installed in your Ikôn.*

To run a demonstration of the *Teklogix Imager* applet features:

• Tap on **Start>Programs>PTSI Imager** icon.

⚠️ *Important: For details about this applet, refer to Appendix C: "Teklogix Imagers Applet".*

5.10   Internet Sharing

This option allows you to use your Ikôn to connect your PC to the Internet. Before you can use *Internet Sharing*, you must make certain that you have established a data connection on your Ikôn.

5.10.1 Creating An Internet Connection

Follow the steps in this section only if you have not already setup an Internet connection.

You'll need the following information before you begin:

From your cellular service provider: data connectivity information, access point name and PAP/CHAP security settings.

From your Internet service provider (ISP) or wireless service provider: access point name and password and any additional security information.

For a GPRS, 1xRTT or dialup connection:

- Tap on **Start>Settings>Connections** tab. Tap on the **Connections** icon.
- Under *My Work Network*, tap **Add a new modem connection**.
- Type a **name** for the connection, and choose **Cellular Line (GPRS)**, or for 1xRTT connections, choose **Cellular Line**. Tap on **Next**.
- Type the **phone number** or **access point name** provided by your service provider, and tap **Next**.
- Type the **credentials** supplied by your service provider, and tap **Finish**.

5.10.2 Using Internet Sharing

- Make certain that your data connect is running, and that you can access the Internet from the Ikôn.

If you are using a USB cable to connect to your PC, you will need to disable the ActiveSync USB connection.

- On your PC, open the **ActiveSync** window, and tap on **File>Connection Settings.**
- Disable **Allow USB connection** by tapping in the checkbox to the left of this option.
- Connect the Ikôn to your PC using *Bluetooth* or a *USB cable*.
- On your Ikôn, tap **Start>Programs>Internet Sharing**.
- Choose the **PC Connection** type–USB or Bluetooth.
- Choose the **network connection** that the Ikôn should use to connect to the Internet.

- Tap **Connect**. It takes approximately 30 seconds to establish a connection. (If you are prompted to turn on *Bluetooth*, tap **Yes**.)

If your are using a ***Bluetooth*** connection, execute the following steps ***on your PC***:

- Tap **Start>Control Panel>Network Connections**.
- Right-click on **Bluetooth Network Connections**, and click on Vie**w Bluetooth Network Devices.**
- If the Ikôn is listed as a *Network Access Point,* choose **Connect**. If it is not listed, choose **Create a new connection** and use the *New Connection Wizard* to add the Ikôn to the list.

5.11   Notes

The Notes application is an electronic notepad you can use to jot down your ideas quickly. You can enter text using the soft keyboard, the Ikôn keyboard, or you can write on the screen using your stylus. You can also record a message.

Notes can also be shared through e-mail and synchronization with your PC.

- Tap on **Start>Programs>Notes** to launch this application.
- If a blank *Note* like the sample screen here is not displayed, tap on **New** in the softkey bar.

5.11.1   Creating A Note

- Choose an entry mode for your note.

To enter text with the *soft keyboard*, the *Transcriber*, the *Block* or the *Letter Recognizer*, tap the stylus on the arrow to the right on the *soft keyboard* icon ⌨▲ to choose your text input method.

To use your stylus to handwrite on the screen, tap on the pen icon ✎▲.

⚠ *Important: Refer to "Entering Text" on page 78 for text entry details.*

- Compose your note using the method you've chosen.
- Tap on **OK** when you're done.

Your note is automatically saved. The file name is the first line of the note if you used the keyboard–otherwise, it's named Note1, Note2 and so on.

5.11.2 Converting Handwritten Notes To Text

When you use the pen tool, you can write notes in your own handwriting and keep them as is, if you like. You can also teach the Ikôn to recognize your handwriting and convert it into printed text.

To convert handwriting into text:

- Tap on the pen tool ✎▲ and compose a note using your stylus.

- Tap on **Menu>Tools>Recognize**.

The text in the note is converted from handwritten to printed text.
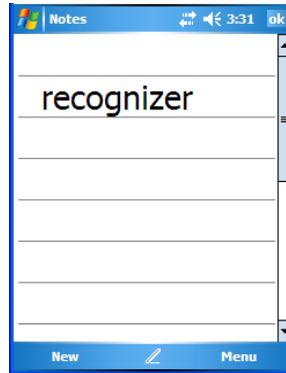
*Note: To convert only a specific portion of your handwritten note into printed type, tap the stylus just before the first letter of the text, pause for a second, and then drag your stylus across the text you want to select. Then, tap on **Tools>Recognize** to convert only the highlighted text.*

Failed Conversions

The Recognize tool sometimes gets the conversion wrong. If some words are not converted properly:

• Press and hold the stylus on the incorrectly converted word.

• In the pop-up menu, choose **Alternative** to display a list of possible alternatives to the incorrectly converted word. Your handwritten version is displayed along the top of the menu.

Figure 5.2 Incorrect Conversions
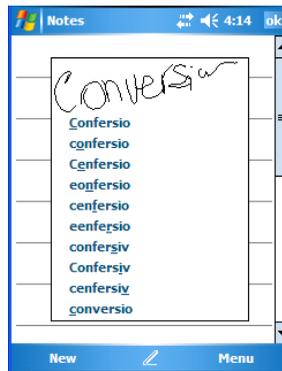
- Tap on the correct word in the list.
- If the correct word is not listed, as is the case in the sample screen above, tap on the soft keyboard icon [⌨️▲] to display the soft keyboard, and type the correct word.

5.11.3 Renaming A Note

- Press and hold the stylus on the file name in the *Notes* screen that you want to rename. In the pop-up menu, choose **Rename/Move,** *or*

Tap the file name to select it, and tap on **Menu>Rename/Move**.

- In the *Name* field, type the new name, and tap **OK**.

5.11.4 Recording Notes

It's sometimes easier to record a note than to write it down just to make certain that you've captured an idea before it drifts away. To make an audio recording:

- Tap on **New** to open a fresh note.
- Tap on **Menu>View Recording Toolbar**.
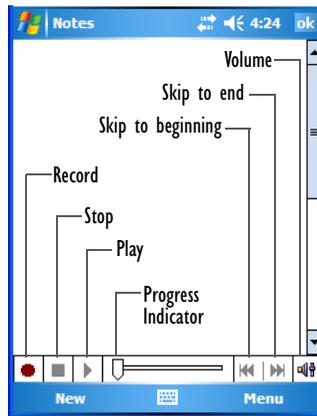
- Tap on the **Record** button–a beep alerts you that your device is now ready to record.
- Begin speaking into the microphone on the Ikôn, or move the Ikôn to within a few feet of the source of the sound you want to record.
- Tap on the **Stop** button when you've completed your recording.
- Tap on **OK** to save the note.

A speaker icon is displayed in the note indicating the presence of a recording within the note.
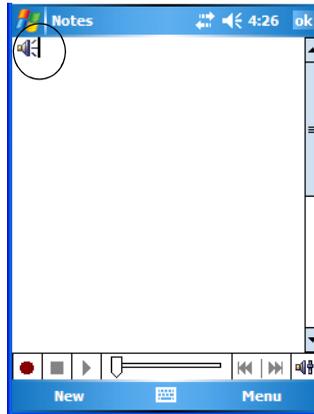
- To play the recorded note, tap on the speaker icon.

5.11.5 Synchronizing A Note

Like *Tasks, Contacts* and so on, the *Notes* program can be synchronized with Outlook on your PC. In this way, all notes, recordings and drawings created in the *Notes* program are copied to your PC and can be edited in Outlook's Notes module.

- To review the steps required to synchronize a note, with a *Note page opened*, tap on **Start>Help**.

Follow the steps in the Ikôn help file to synchronize your note.

5.12 Pictures & Videos

The *Pictures & Videos* applet allows you to snap photographs and record video footage. It is also a photo and video viewing program.

> ⚠ *Important: The Pictures & Videos program can only display .bmp or .jpg formats. Photos in other formats will need to be converted on your PC before they are transferred to the Ikôn.*

5.12.1 Using The Camera

- Tap on **Start>Programs>Pictures & Videos**.
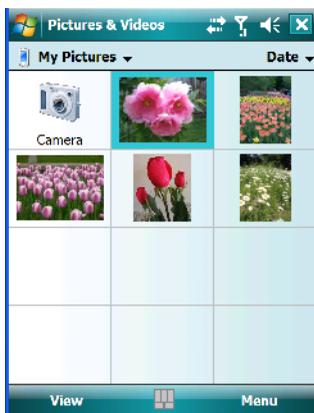
Keep in mind that if there are no pictures stored on your Ikôn as yet, you'll only see the *Camera* icon in this screen.

• Tap on the **Camera icon** to activate the camera.

The screen will display the image your camera is pointed at. (The camera is built into the back of the Ikôn.)

Photo File Icon
Indicates the camera
is active.

Tapping on this softkey
displays thumbnails of
photos stored on the Ikôn.
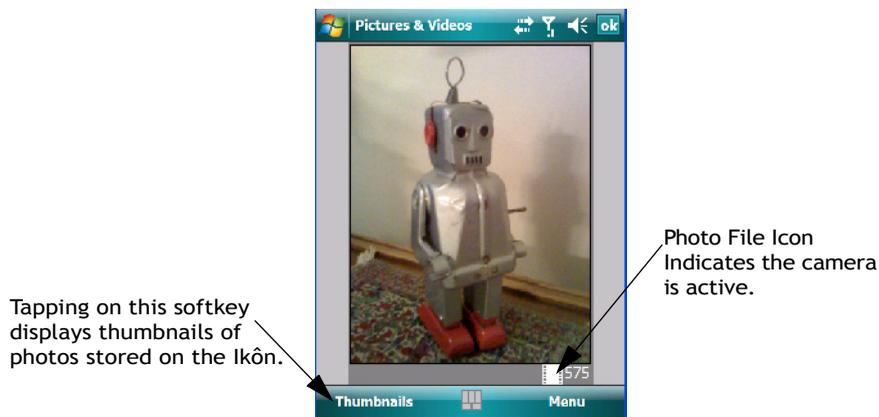
• Frame the image in the Ikôn screen. Press **[ENTER]** to snap the photograph.

Photo Menu

When the camera is activated, tapping on *Menu* displays a set of commands to help you modify how your camera operates, the quality of the photos it takes, and so on. You can also use this menu to activate the video recorder rather than the still camera.

Note: 'Video' is a toggle command. When the still camera is activated, 'Video' is available in this menu. When the video recorder is activated, 'Still' (camera) is available in this menu.

5.12.2 Moving Photos To The Ikôn

- Connect your device to your PC with ActiveSync.

- On your PC, using Windows Explorer (right-click *My Computer* and click on *Explorer*), drag photos from their folder to the *Mobile Device>My Pictures* folder.

5.12.3 Opening A Photo

- To open a photo, tap on **Start>Programs>Pictures & Videos**. You'll see a thumbnail of your photos.

• Tap on a thumbnail to open the photo.
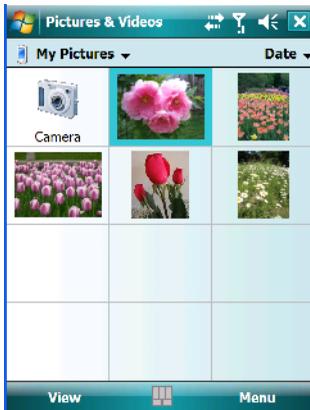
Note: If you've stored your photos on a storage card, you'll need to tap on the storage card icon to display your photos.

5.12.4 Deleting A Photo

• Press and hold the stylus on the thumbnail photo you want to delete to display a pop-up menu. Tap on **Delete**.

• Confirm your choice when prompted.

5.12.5 Editing A Photo

• Tap a thumbnail photo to open it.

• Tap on **Menu>Edit**.

The *Rotate* command is now displayed in the softkey bar. Additional editing tools are now listed in the *Menu*.

5.12.6 Creating A Slide Show

To view a slide show:

• Tap on the **Menu>Play Slide Show**.

The slide show begins–in slide show mode, photos are displayed for about five seconds, one after the other.

• To display the slide show tool bar, tap anywhere on the photo.
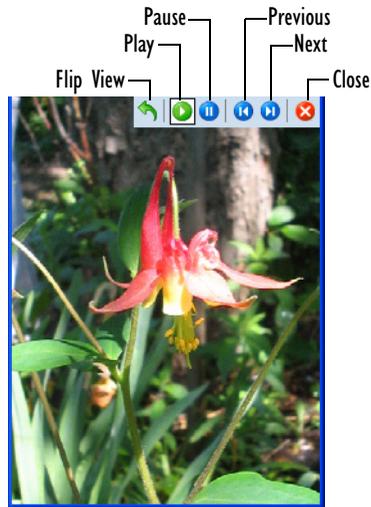
5.12.7 Using The Video Recorder

• Tap on the **Camera** icon.
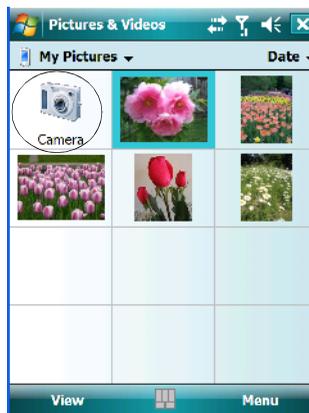
- In the bottom-right corner of the *camera* screen, tap on **Menu>Video**.
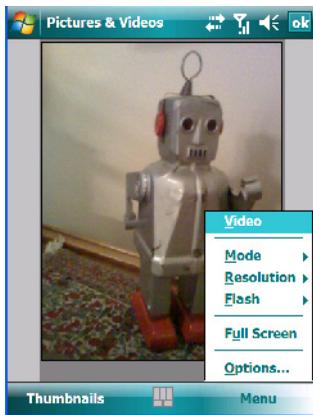
- Press **[ENTER]** to begin recording.

Video Recorder Icon Indicates that video is active.

- To end the video, press **[ENTER]** again, or tap on the **Stop** softkey.

Note: When the 'Video' recorder is activated, a Menu is available to tailor the operation of the recorder, the quality of the recording, and so on.

5.13   Remote Desktop Mobile

This program allows you to log onto a Windows Terminal Server and run the desktop programs from the server on your Ikôn.

5.13.1 Connecting To A Terminal Server

- Tap on **Start>Programs>Remote Desktop Mobile**
- In the *Server* dialog box, type the **Terminal Server name** or **TCP/IP address**, or choose a server from the dropdown menu.
- Tap on **Connect**.
- In the *Remote Desktop Connection* window, type your **user name, password**, and **domain** (if required). Tap on **OK**.

5.13.2 Disconnecting Without Ending A Session

⚠️ *Important: These commands are accessed from the Start menu in the <u>Terminal Services screen</u> used to access the PC's commands. Do NOT use the Start menu on your Ikôn.*

- In the *Remote Desktop Connection* window, tap on **Start>Shutdown**.
- Tap on **Disconnect>OK**

5.13.3 Ending A Session

- In the *Terminal Services Client* screen, tap on **Start>Shutdown**.
- Tap on **Log Off>OK**.

5.14 Summit Client Utility (SCU)

The SCU provides the utilities you will need to configure the Summit 802.11b/g Compact Flash radio module so that it can communicate through a wireless LAN network effectively and securely. Refer to "Using The SCU To Connect To The WLAN" on page 17 for setup details.

5.15   Search

• Tap **Start>Programs**, and then tap on the **Search** icon.
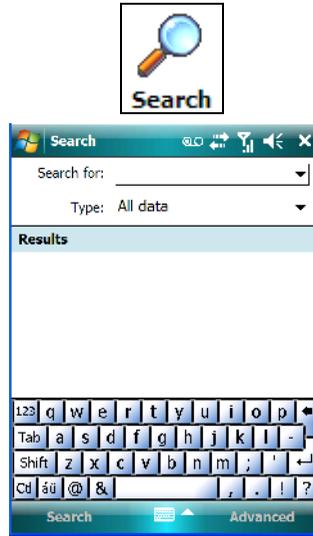
• In the *Search for* field, type the item for which you're looking.

• To narrow your search, tap on the **Type** dropdown menu and choose from a list of pre-existing programs. To search through all files, leave this option at *All Data*.

5.16   Task Manager

Refer to "Task Manager" on page 171 for details about this applet.

5.17   Tasks

This program helps you stay ahead of your schedule by managing your tasks, appointments, and so on. For details about Tasks, refer to "Task Notification" on page 63.

5.18   Internet Explorer

*Note: Internet Explorer is available from the Start menu by default. If you prefer it only be accessed from the **Programs** window, tap on **Start>Settings**, tap on the **Menus icon** and uncheck **Internet Explorer**.*

You can connect to *Internet Explorer* in two ways: by connecting the Ikôn directly to the Internet or by connecting through your PC while the Ikôn is attached via ActiveSync (see "ActiveSync®" on page 85).

5.18.1 Browsing Web Sites

There is little difference between the standard Internet Explorer found on your PC and that found on your Ikôn, sometimes referred to as *Pocket Internet Explorer*. You can enter URLs, set a 'home page', turn images on and off, e-mail links to friends, and so on.

To go to a web site:

- Connect your Ikôn to the Internet. (If you're not certain how to do this, tap on **Start>Internet Explorer** to display a blank window. Next, tap on **Start>Help** and follow the steps listed.)

- Tap on **Start>Programs>Internet Explorer** to open *Internet Explorer*.

If *Internet Explorer* is listed in the *Start* menu rather in the *Program* screen, tap on **Start>Internet Explorer**.

- Tap on the address bar – the field near the top of the screen where URLs are entered – to highlight the current URL.

- Type a new URL in the address bar.

Tapping on the *softkeys* in the softkey bar at the bottom of the screen display *Internet Explorer* commands like those you find on your PC.
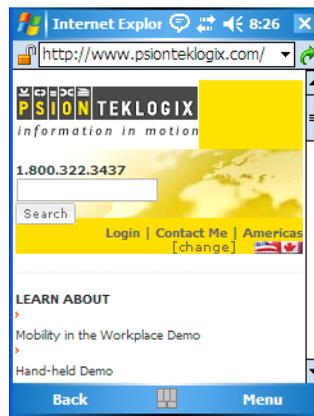
5.19   Messaging

*Note: Messaging is available from the Start menu by default. If you prefer it only be accessed from the **Programs** window, tap on **Start>Settings**, tap on the **Menus icon** and uncheck **Messaging**.*

The *Messaging* program is used to send and receive e-mail on your Ikôn. To send and receive e-mail, you'll need to synchronize your PC or connect to a Post Office Protocol 3 (POP3) or Internet Message Access Protocol 4 (IMAP4) mail server.

For each of these methods, you need to set up an e-mail account with one exception – Outlook e-mail accounts are set up by default.

5.19.1 Folders

If you use an Outlook e-mail account, messages in the Inbox folder in Outlook are automatically synchronized with your Ikôn. You can use ActiveSync on your PC to synchronize additional folders. The folders and messages you move are mirrored on the server.

For POP3 accounts, if you move e-mail messages to a folder you create, the link between the messages on the Ikôn and the copies on the mail server are broken. When you next connect, the mail server will recognize that the messages are missing from the Ikôn Inbox folder and delete them from the server, preventing duplication of messages. Keep in mind however that you will not have further access to messages that you moved to folders from anywhere except with the Ikôn.

For IMAP4 accounts, the folders you create and the messages you move are reflected on the server, making messages available any time whether you connect to your mail server from your Ikôn or your PC.

5.19.2 Synchronizing E-mail With Outlook

By synchronizing the Ikôn *Messaging* program with Outlook on your PC, your e-mail is available on both the Ikôn and on your PC.

Note: Synchronizing e-mail does not require that the Ikôn have an independent connection to the Internet.

• In ActiveSync on your PC, tap on **Tools>Options** in the tool bar at the top of the screen.
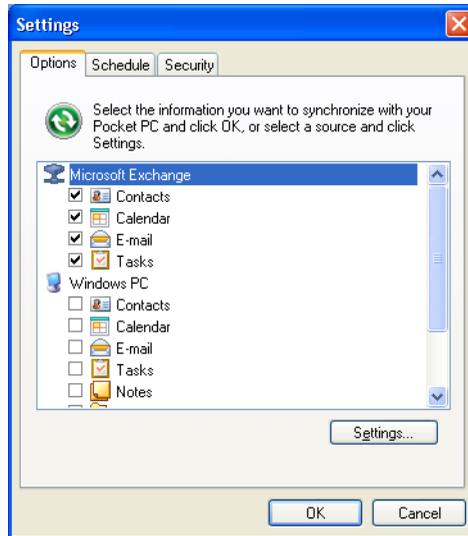
• Make certain that a check mark is displayed in the checkbox next to *E-mail*. Tap on **OK**.

Once you check *E-mail* for synchronization, Outlook e-mail messages are synchronized as part of the general synchronization process. The next time you synchronize with Active-Sync, the e-mail in Outlook on your PC will be transferred to the Messaging program on your Ikôn.

5.19.3 Changing Synchronization Settings

- In ActiveSync on your PC, double-tap the **E-mail** item in the *Sync Options* tab.
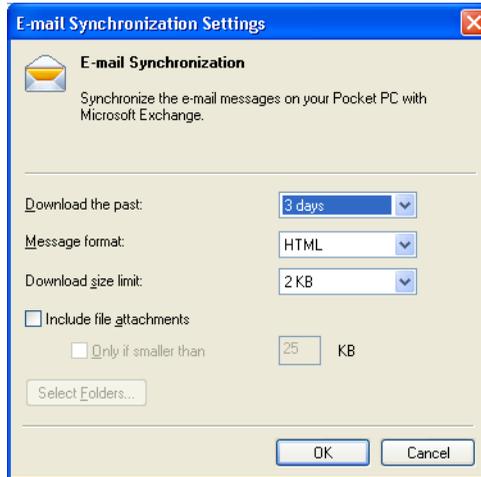
- Tap on the **Select Folder** button.

- Add a checkmark next to the folders in this screen that you want to synchronize with your Ikôn, and tap on OK.

The *E-mail Synchronization* screen is displayed again.

- If you want to accept file attachments, add a check mark next to *Include file attachments*. To limit the size, tap on Only if smaller than, and specify a size in the KB box.

- Tap on **OK**.

5.20   Windows Media

Windows Media allows you to play music and videos on your Ikôn. You can use *Windows Media* to play digital audio and video files that are stored on your Ikôn or on the Web.

- To work with this applet, tap on **Start>Programs>Windows Media**.
- To find detailed instructions about this option, tap on **Start>Help**, and in the list of help files, tap on **Use Windows Media Player Mobile**.

6.1   Settings

The *Settings* screen is divided into three tabs – *Personal*, *System* and *Connections*.

•   Tap on **Start>Settings** to display this screen.

Figure 6.1 Settings Tabs
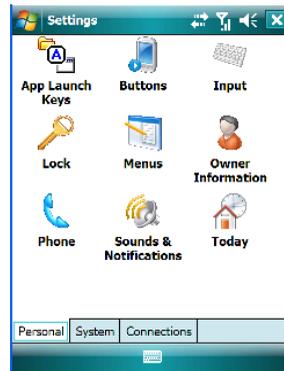
6.2   Personal Settings

The *Personal* tab allows you to tailor the general behaviour of your Ikôn such as defining input methods, *Start* menu options, owner information, password assignment, sound specifications, and so on.

6.3   App Launch Keys

The *App Launch Keys* icon allows you to map a key to an application so that you can then launch the application from a single key-press.

- Tap on **Start>Settings**, and then tap on the **App Launch Keys** icon.
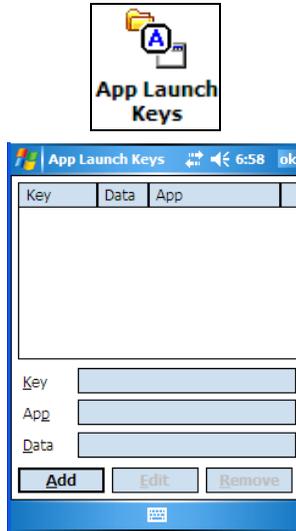
To assign an application key:

- Tap the **Add** button.
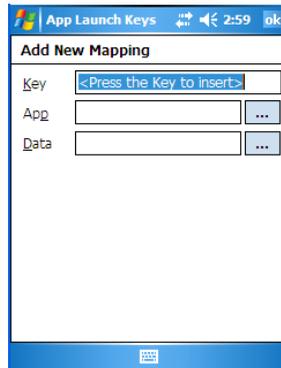
- Press the key you want to use to launch an application. (If an unsupported key is pressed, a message appears on this screen letting you know.)

The cursor moves to the *App* field and a new screen is displayed where you can choose the application to which you want to assign the application key. If you need to, you can *Browse* through the information in your Ikôn until you locate the application you want to launch.
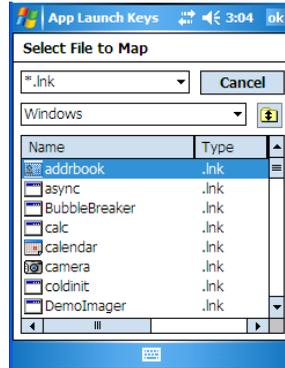
- Once you've selected the file you want to map, tap on **OK**.

The cursor moves to the *Data* field. You can use this field if you need to define special parameters to your application launch key. If you don't want to assign any parameters, you can leave the *Data* field blank. If, for example, you want to assign an application launch key to launch the *Word Mobile* application, you can leave this field blank. If you want to assign an application launch key that will open a specific document in the *Word Mobile* application, you need to browse to and choose that document while the cursor is in the *Data* field.

- Tap on **OK**.
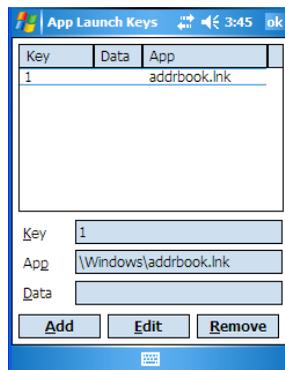
- If you need to *Edit*, *Remove* or *Add* another *App Launch Key*, you can do it from this final screen. Otherwise, tap on **OK** to save you *Application Launch Key*.
- To launch the application you chose, press the application key you assigned.

6.4   Buttons Icon

•   Tap on **Start>Settings**, and then tap on the **Buttons** icon to display your options.

Note: The 'Program Buttons' option is not available on the Ikôn Rugged PDA.

6.4.1   Up/Down Control
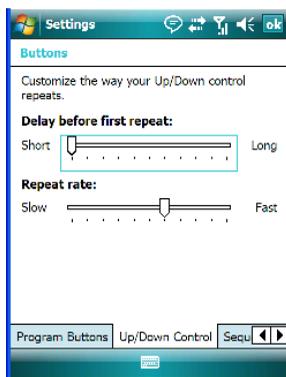
Sliding the *Delay before first repeat* bar to the left decreases the delay between key repeats while sliding the bar to the right increases the repeat delay time.

Sliding the *Repeat rate* bar to the left slows the rate at which an [Up/Down] button repeats when pressed. Sliding the bar to the right increases the key repeat rate.

6.4.2   Sequence
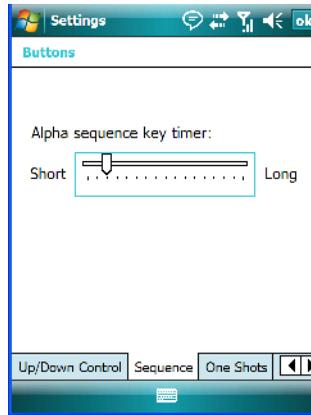
This slider determines the allowable pause between alpha key presses on a numeric keypad. For example, suppose you want to type the letter 'c' – you would need to press the [2] key *three* times. With the [ORANGE] key locked 'on', if you press [2] twice and then pause between key presses for 1 second, the letter 'b' will be selected automatically. Moving the *Sequence* slider to the right increases the pause time between alpha key presses.

6.4.3   One Shots
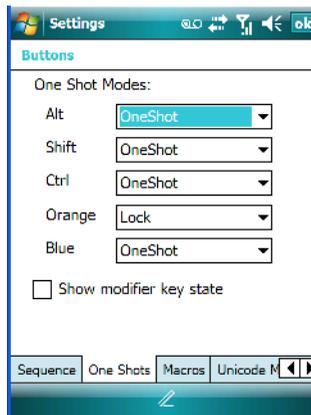
The options in this tab allows you to determine how modifier keys on your Ikôn behave. For each modifier key–[ALT], [SHIFT], [CTRL], [ORANGE] and [BLUE] – you have the following options in the dropdown menu: Lock, OneShot, and OneShot/Lock.

> ⚠️ ***Important:*** ***Once you've assigned a One Shot mode to a modifier key, you need to tap on the OK button at the top of the tab to activate your selection.***

Lock

If you choose *Lock* from the dropdown menu, pressing a modifier key once locks it 'on' until you press the modifier key a second time to unlock or turn it off.

OneShot

If you choose *OneShot*, the modifier key remains active only until the next key is pressed.

OneShot/Lock

OneShot/Lock allows you to combine these functions. If you choose this option and press the modifier key ***once***, it remains active only until the next key is pressed.

If you choose *OneShot/Lock* and then press the modifier key ***twice***, it is locked 'on', remaining active until the modifier key is pressed a third time to turn it 'off'.

Show Modifier Key State

When you enable *Show modifier key state*, a *shift-state indicator* icon ▦ replaces the soft keyboard icon in the softkey bar at the bottom of the screen. When a modifier key is pressed, a square in this icon is highlighted. A 'locked' modifier key is displayed in the *shift-state indicator* icon with a black frame around it.

6.4.4   Keyboard Macro Keys
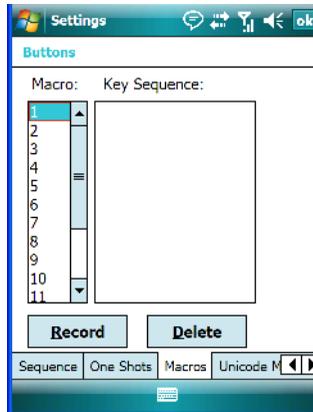
Macro keys are not labelled on the keypad. However, you can map up to 12 macro functions using the keyboard remapping function described in "Scancode Remapping" on page 129. A macro has 20 programmable characters (or "positions"). The macro keys can be programmed to replace frequently used keystrokes, along with the function of executable keys including [ENTER] and [BKSP], function keys, and arrow keys.

Recording And Saving A Macro

- In the *Macro* menu, highlight a macro key number–for example, macro 1 to assign a macro to macro key [M1]. Tap on the **Record** button.

A *Record Macro* screen is displayed.

- Type the **macro sequence** you want to assign to the Macro key. You can type text and numbers, and you can program the function of special keys into a macro.

- When you've finished recording your macro sequence, tap on **Stop Recording**.

A new screen – *Verify Macro* – displays the macro sequence you created.

- Tap on the **Save** button to save your macro. Your macro key sequence is listed in the *Macro* screen.
- Tap on **OK** to save your macro key assignment.

Executing A Macro

- Press the macro key to which you've assigned the macro to execute it.

Deleting A Macro

- In the *Macros* tab, highlight the macro number you want to delete.
- Tap on the **Delete** button.

6.4.5   Unicode Mapping

- Tap on the **Unicode Mapping** tab to display this screen.
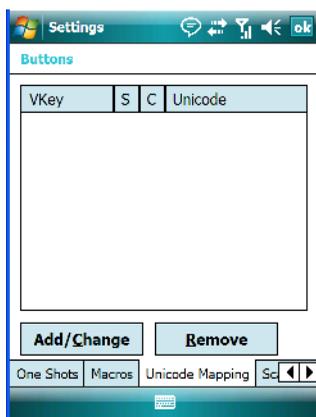
The *Unicode Mapping* tab is used to map combinations of virtual key values and [CTRL] and [SHIFT] states to Unicode™ values. This tab shows the configured Unicode character along with the Unicode value. For example, "a (U+0061)" indicates that the character "a" is represented by the Unicode value "0061", and so on. Keep in mind that Unicode configurations are represented as hexidecimal rather than decimal values.

All user-defined Unicode mappings are listed in the *Unicode Mapping* tab in order of virtual key value, and then by order of the shift state. If a Unicode mapping is not listed, the Unicode mapping is mapped to the default Unicode value.

Adding And Changing Unicode Values

⚠️ *Important: **Changes to Unicode mappings are not saved until you exit the Unicode Mapping tab by tapping on [OK].***

• Tap on the **Add/Change** button.
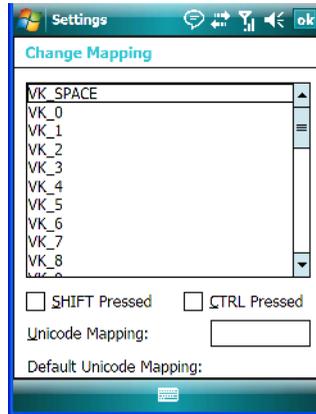
• Highlight a value in the Unicode mapping list.
• Position the cursor in the **Unicode Mapping** field, and type a **Unicode value** for the highlighted key.

📖 *Note: To add a shifted state – [SHIFT] and/or [CTRL], tap on the checkbox next to 'SHIFT Pressed' and/or 'CTRL Pressed'.*

Removing Unicode Values

• In the *Unicode Mapping* tab, highlight the item you want to delete, and tap the **Remove** button.

6.4.6   Scancode Remapping

A scancode is a number that is associated with a physical key on a keyboard. Every key has a unique scancode that is mapped to a virtual key, a function or a macro. Scancode Remapping allows you to change the functionality of any key on the keyboard. A key can be remapped to send a virtual key (e.g. VK_F represents the 'F' key; VK_RETURN represents the [ENTER] key, etc.), perform a function (e.g. turn the scanner on, change volume/contrast, etc.) or run a macro.

There are three different tables of scancode mappings: the Normal table, the Blue table and the Orange table. The *Normal* table defines unmodified key presses; the *Blue* table defines key presses that occur when the [BLUE] modifier is on; the *Orange* table defines key presses that occur when the [ORANGE] modifier is on. The default mappings of these scancodes can be overwritten for each of these three tables using the Scancode *Remapping* tab.
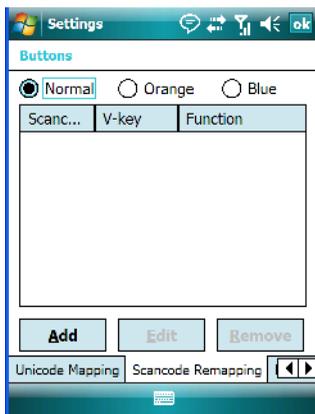
The first column in the *Scancode Remapping* tab displays the Scancodes in hexidecimal. If the scancode is remapped to a virtual key, that virtual key is displayed in the next column labelled 'V-Key'. A virtual key that is 'Shifted' or 'Unshifted' is displayed in the third column labelled 'Function'.

If the scancode is remapped to a function or a macro, the first and second columns remain blank while the third column contains the function name or macro key number (e.g., Macro 2).

Adding A Remap

To add a new remapping:

• Tap the **Add** button at the bottom of the dialog box.

The *Remap Scancode* dialog box is displayed.
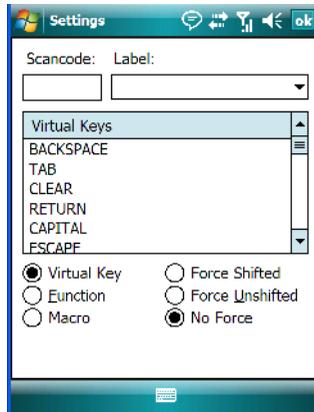
- Type the **scan code in hexidecimal** in the field labelled **Scancode**.

Note: The 'Label' field displays the default function of the scancode you are remapping.

Virtual Key, Function And Macro

The radio buttons at the bottom of the dialog box allow you to define to what the scan code will be remapped to: Virtual Key, Function or Macro.

When *Virtual Key* is selected, you can choose to force [SHIFT] to be on or off when the virtual key is sent. If No Force is selected, the shift state is dependent on whether the shift state is on or off at the time the virtual key is sent.

When *Function* is selected, a list of valid functions appears in the dialog box.

When *Macro* is selected, the macro keys available on your unit are listed in the dialog box.

- Choose **Virtual Key>Function** or **Macro**.
- Choose a function from the *Function list*, and tap on **OK**.

Editing A Scancode Remap

- In the *Scancode Remapping* tab, tap on the remap you want to edit.
- Tap on the **Edit** button, and make the appropriate changes.
- Tap on **OK** to save your changes.

Removing A Remap

- In the *Scancode Remapping* tab, highlight the scancode you want to delete, and tap on the **Remove** button.
- Tap on **OK**.

6.4.7 Lock Sequence

The *Lock Sequence* tab allows you to lock the Ikôn keyboard to prevent keys from being pressed accidentally when, for example, the unit is inserted in a holster.
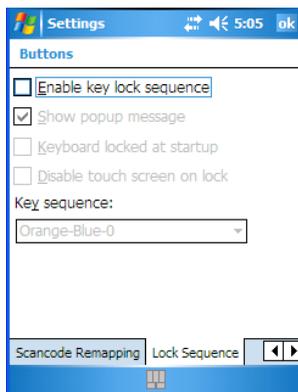
- To lock the keyboard, tap in the checkbox next to **Enable key lock sequence**.

Note: It is useful to leave the 'Show popup message' enabled (default) so that anyone attempting to use the Ikôn keyboard will see the key sequence they will need to enter to unlock the keyboard displayed on the screen.

- If you want the keyboard to be locked at startup, tap in the checkbox next to *Keyboard locked at startup*. Otherwise, leave this option disabled.
- In the *Key sequence* dropdown menu, choose the key sequence you will use to lock and unlock the keyboard.
- Tap on **OK**.
- To *lock* the keyboard, type the **key sequence** you chose – for example, *Orange-Blue-0*.

A *locked keyboard* icon is displayed in the softkey bar when the keyboard is locked.

Locked Keyboard
Icon

- To *unlock* the keyboard, type the **key sequence** again.

6.5   Input

The *Input* icon provides access to text input options you can use to tailor the soft keyboard, block recognizer, letter recognizer and transcriber along with voice recording options.

6.5.1   Input Method Tab

- •   Tap on **Start>Settings** and then on the **Input** icon to display your options.
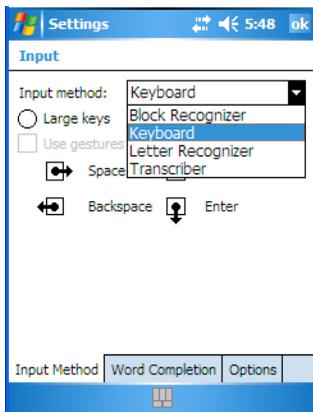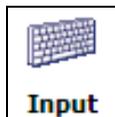
A dropdown menu next to *Input method* allows you to tailor your methods of input – *Block Recognizer, Keyboard, Letter Recognizer* and *Transcriber*.

Block Recognizer

Block Recognizer teaches you how to conform your handwriting to what the Ikôn can recognize.

Important: Refer to "Block Recognizer And Letter Recognizer" on page 80 for additional details.

Keyboard Options
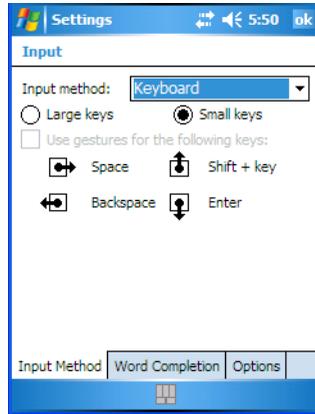
This screen is displayed when you choose *Keyboard* in the *Input method* dropdown menu. You can use it to customize the soft keyboard. You can choose *Large Keys* or *Small Keys* to increase or decrease the size of the keys displayed on the soft keyboard.

If you enable *Use gestures for the following keys*, these keys are removed from the soft keyboard. Gestures are handwriting shortcuts for the keyboard keys. Before you can enable this option, you'll need to tap on the radio button to the left of *Large keys*.

Letter Recognizer Options

Letter Recognizer teaches you how to conform your handwriting to what the Ikôn can recognize.

⚠ *Important: Refer to "Block Recognizer And Letter Recognizer" on page 80 for additional details.*

To display additional letter recognition options, tap on the **Options** button in the *Letter Recognizer* screen.

Figure 6.2 Letter Recognizer Quick Settings
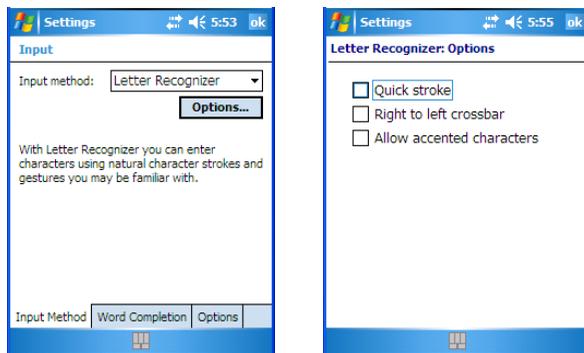
These options allow the *Letter Recognizer* to better interpret any specialized strokes and accents you may wish to use.

Transcriber Options

Note: Before you can display the Options for Transcriber, you need to select Transcriber as the active input method. Tap on the arrow to the right of the keyboard icon in the taskbar, and choose Transcriber.

When you choose *Transcriber* as the input method, three tabs of options are available to you – *Quick Settings, Inking* and *Advanced*.
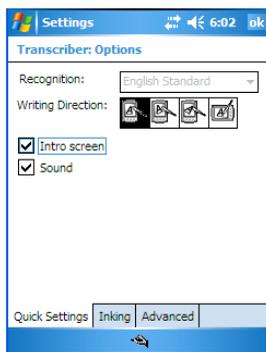
Quick Settings

The *Quick Settings* tab allows you choose the writing direction–the icons indicate direction. In addition, you can choose to enable or disable the display of the Introductory screen and the sound each time you launch the *Transcriber*.

Inking

In the *Inking* tab, you are presented with a number of options. *Recognition Delay* allows you to determine the time delay between writing something on the *Transcriber* screen and its recognition into printed text.
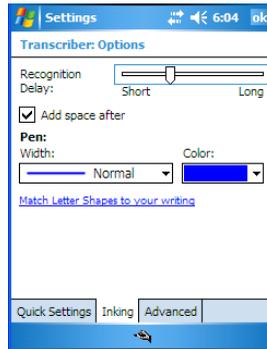
Enabling *Add space after* automatically adds a space after each word you write. The *Pen* option allows you to choose the line *Width* and *Colour*. Finally, tapping on *Match Letter Shapes to your writing* displays a screen in which you can learn how to form letters to help the Ikôn to recognize the most often used characters.

Advanced

In this tab, *Shorthand* allows you to create a shortened word that the *Transcriber* will recognize and expand into a complete word automatically. You can also insert data such as a date or run a program.
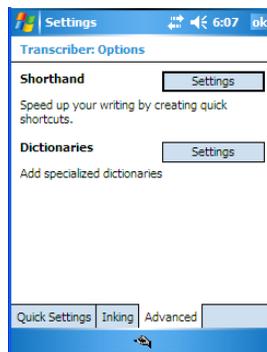
6.5.1.1 Word Completion
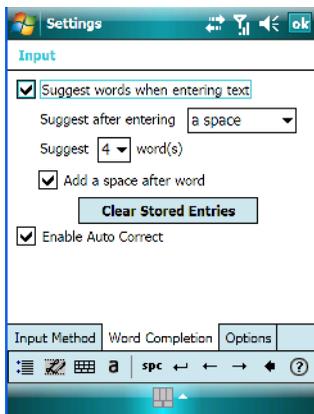
This tab speeds the writing process regardless of the input method chosen. When you begin entering a word, this option displays what it assumes is the complete word, saving you having to type the word in its entirety. You can also tailor how and when you want word suggestions made.

6.5.2 Options-Additional Choices
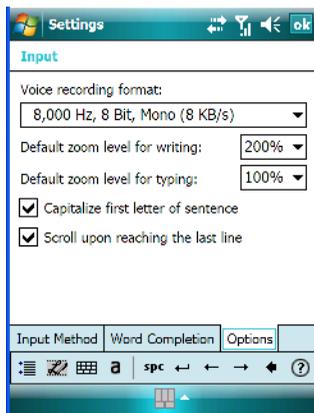
This tab offers a few choices including choosing a voice recording format, zoom percentage for writing and typing, automatic capitalization of the first letter in a sentence and automatic scrolling when you've reached the bottom of the screen.

6.6   Lock

To protect the data stored in your Ikôn, you can assign a password that must be entered each time the unit is switched on.

- Tap on **Start>Settings**, and then tap on the **Lock** icon.

It is critical that you store your password in a safe place. If you forget it, a 'clean start' must be performed by certified Psion Teklogix personnel. A clean start returns the Ikôn to factory settings. Only the data stored in a CF or SD memory card are preserved.

- Tap in the checkbox next to *Prompt if device unused* to turn on password protection.
- Choose the amount of time that the unit can remain idle before you are prompted to enter your password.
- In the *Password type* dropdown menu, choose the type of password you prefer to assign. *Simple PIN* allows you to enter a minimum of four numeric characters. *Strong alphanumeric* requires a minimum of 7 characters and must contain at least three of the following: uppercase and lowercase alpha characters, numbers and punctuation.
- Tap on the **Hint** tab to enter a word or phrase that will remind you of your password. The Ikôn will display the hint after the wrong password is entered five times.
- Tap on **OK**. A dialog box asks whether or not you want to save you password settings. Tap on **YES** to save your password assignment.

6.7   Menus

The *Menus* icon allows you to display options to customise the *Start Menu*.

- Tap on **Start>Settings** and then tap on the **Menus** icon.

6.7.1   Start Menu Tab

This tab allows you to define the items that will be listed in your *Start* menu.
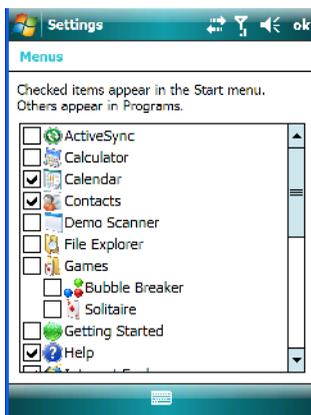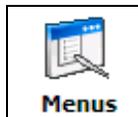
- In the *Start Menu* dialog box, tap on the items you want to appear in your *Start* menu.

The checked items will be listed in your *Start* menu.

6.8   Owner Information

Tapping on *Start>Settings* and then tapping on the *Owner Information* icon allows you to add your personal information to the Ikôn. Some of this information will be displayed in the desktop *Today* screen.
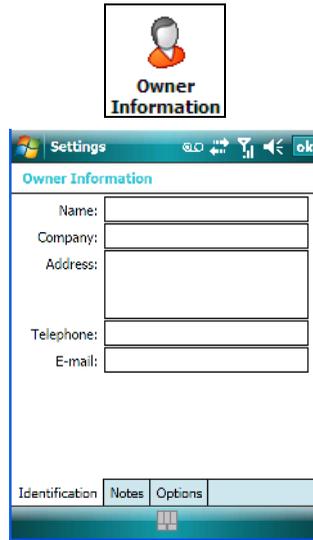
Important: Refer to "Ownership Information" on page 62 for details about this option.

6.9   Phone (Windows Mobile 6.1 Professional Only)

Tapping on *Start>Settings* and then tapping on the *Phone* icon allows you to adjust phone settings such as the ring type and tone, choose phone services such as barring calls, and you can also determine network selections.
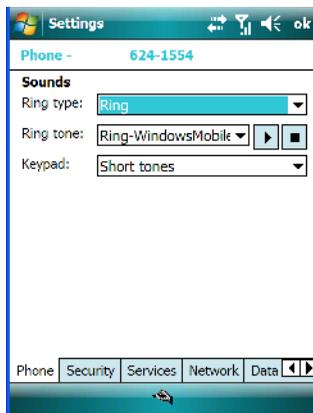
Important: Refer to "Managing Phone Settings" on page 25 for details about this option.

6.10   Sound & Notifications

The *Sounds & Notifications* icon allows you to specify when your Ikôn will emit sounds.

6.10.1   Sounds

- Tap on **Start>Settings**, and then tap on the **Sounds & Notifications icon** to display this dialog box.
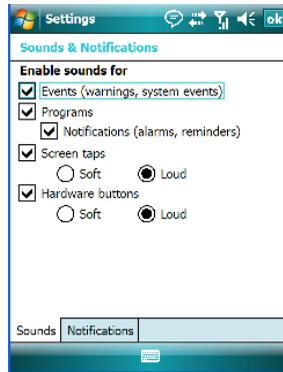
- Tap in the checkboxes and radio buttons to enable the event(s) that will cause your unit to emit a sound.

6.10.2   Notifications

Tap here to play your ring choices

Tap here to end the ring test
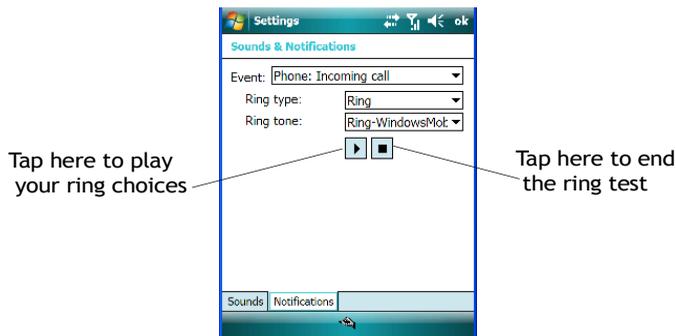
This tab allows you to determine how you are notified about different events.

- Choose an event from the *Events* dropdown menu.
- Choose the **Ring type** and **Ring tone**. Tap on the arrow below *Ring tone* to test your choices. The small square button stops the ring test.

6.11 Today Screen

This option allows you to tailor the appearance of the *Today* screen – the desktop screen.

- Tap on **Start>Settings**, and then tap on the **Today** icon.

6.11.1 Appearance
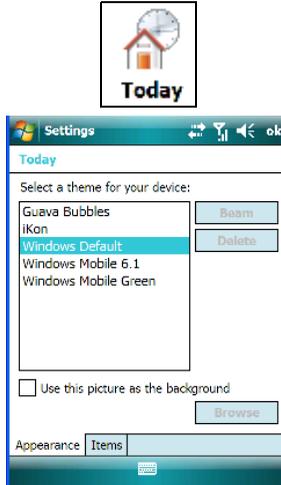
This screen allows you to customize the background displayed on the *Today* screen.

- Choose the background you want to use from the list.

6.11.2 Items
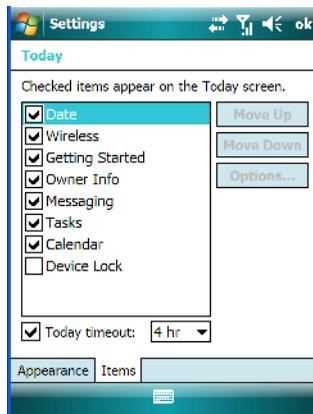
This tab allows you to choose and to sort the item(s) that you want listed in the *Today* screen.

- Tap in the checkbox to the left of the item(s) you want displayed in the *Today* screen.

- To rearrange the list of items, highlight the item you want to move up or down and tap on the **Move Up** or **Move Down** button. Keep in mind that the *Date* cannot be moved.

6.12   System Tab Settings

To display the icons grouped in the *System* tab:

- Tap on **Start>Settings**, and tap on the **System** tab.

6.13   About

Tapping on *Start>Settings>System* tab, and then the *About* icon displays a grouping of tabs that provide device information.

Version Tab

This tab outlines the Windows Mobile 6.1 version, processor information, memory size and a description of the expansion card, if one is in use.

Device ID Tab

This tab provides fields in which you can assign a Device name and Description (optional) for the Ikôn. This name is used by the Ikôn to identify itself to other devices.

Keep in mind that this must be a unique name across a network. If you are unable to connect to a network because another device with the same name is already connected, you'll need to assign a new name here.

Copyrights

The *Copyright* tab lists the copyright information for the software loaded on your Ikôn.

6.14   About Device

Tapping on the *About Device* icon under *Settings>System* tab provides access to three tabs related to your Ikôn. The *Properties* tab lists hardware information related to your Ikôn. The *Copyrights* tab lists the copyrights that apply to your Ikôn. The *Experience* tab allows you to choose a category to help you define your Experience. These categories include *Microsoft settings*, *Psion Teklogix settings* and *Custom settings* in a dropdown menu. Each category contains a group of default settings. If you change a default setting, the category is automatically changed to *Custom settings*.

6.15   Backlight

• Tap on **Start>Settings**, then tap on the **System** tab. Tap on the **Backlight** icon.

Tapping on the *Backlight* icon allows you to determine the power properties of the Ikôn.

6.15.1   Battery Power
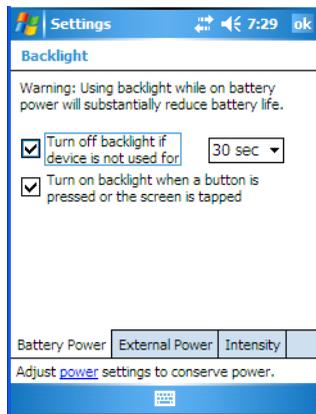
This tab allows you to tailor the Ikôn backlight behaviour to best preserve battery life.

• To define how long the backlight should stay on when the Ikôn is not in use, tap in the checkbox to the left of **Turn off backlight if device is not used for.**

• Tap on the dropdown menu, and choose the number of seconds or minutes the backlight will remain on when the Ikôn is idle.

- To **Turn on backlight when a button is pressed or the screen is tapped**, tap in the checkbox to the left of this option.

6.15.2 External Power
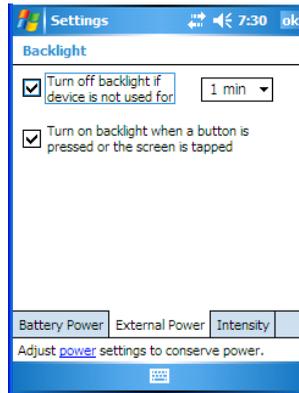
This tab determines the behaviour of the backlight when the Ikôn is using external rather than battery power.

⚠️ *Important: Refer to "Battery Power" on page 146 for details about these options.*

6.15.3 Intensity
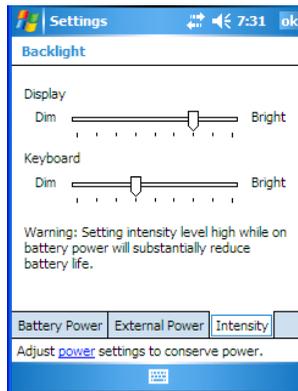
This tab is used to adjust the light intensity of the *display backlight* and the *keyboard backlight*. Sliding the bar to the left lowers the light intensity, and sliding it to the right raises the intensity.

6.16   Certificates

A public key is transmitted as part of a certificate. The certificates listed in the *Certificates* tabs ensure that the submitted public key is, in fact, the public key that belongs to the submitter. The Ikôn checks that the certificate has been digitally signed by a certification authority that the Ikôn explicitly trusts.

Your Ikôn has certificates already preinstalled in the unit. *Personal* certificates establish your identity, *Intermediate* certificates, as the name suggests, identifies intermediate certification authorities and *Root* certificates establish the identity of the servers with which you can connect.

- Tap on **Start>Settings**, and then tap on the **System** tab.
- Tap on the **Certificates** icon.

Personal Tab
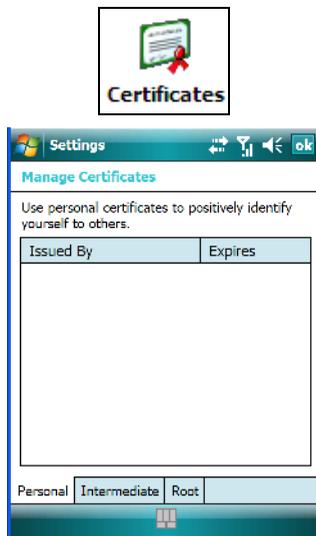
The *Personal* tab lists the name of the certificate issuer and the expiration date.

- To view additional information about a personal certificate, tap on a certificate in the list.
- To delete a certificate, tap and hold the stylus on the item you want to delete until a pop-up menu is displayed. Tap on the **Delete** command.

Intermediate Certificates

The items in this list help identify intermediate certification authorities.
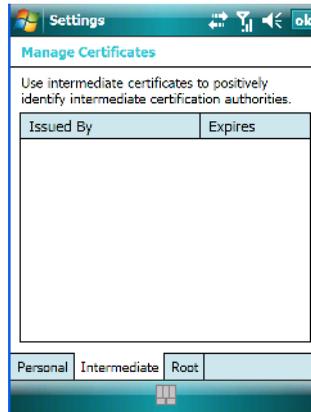
Root Certificates
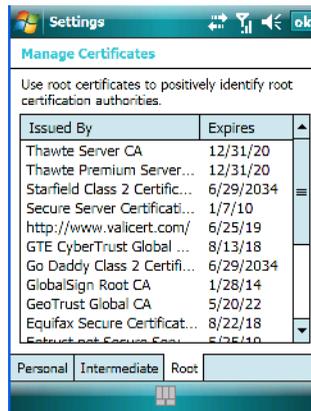
- To view details about a certificate – who issued the certificate, to whom it was issued, the issue date and the expiry date – tap on a certificate in the list.
- To delete a certificate, tap and hold the stylus on the certificate you want to delete.
- In the pop-up menu, tap on the **Delete** command.

6.16.1 Choosing A Certificate

Normally, certificates already configured for your network are chosen automatically by the Ikôn. If a certificate cannot be chosen automatically, you must choose it from the *Certificates* list.

• To choose a certificate, tap the desired certificate. Your Ikôn will connect automatically.

6.17 Clock & Alarms

Located under *Start>Settings>System* tab, the *Clock & Alarm* icon allows you to set the current date and time, and it allows you to define up to three alarms.
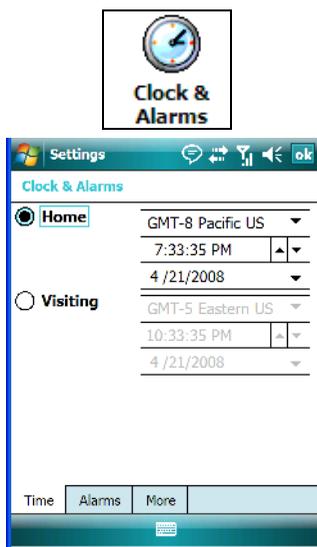
> ⚠ *Important: Refer to "Today's Date, Clock And Alarm" on page 61 for details about setting up these options.*

6.18 Customer Feedback

This option allows Microsoft to track how you use your Ikôn so that they can make improvements to the software. The radio buttons allow you to turn this feature on or off.
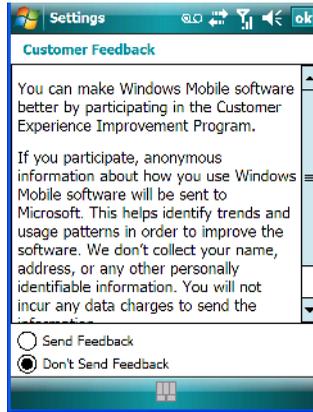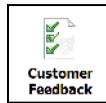
Note: If you want to make this option inaccessible, go to Start>Settings and tap on the About Device icon. In the Experience tab, remove the checkmark to the left of Enable Customer Feedback and SQM (reset required). As indicated, you'll need to reset the Ikôn.

6.19   Encryption

This option allows you to encrypt the data on your storage card.

- Tap on **Start>Settings>System tab>Encryption icon.**
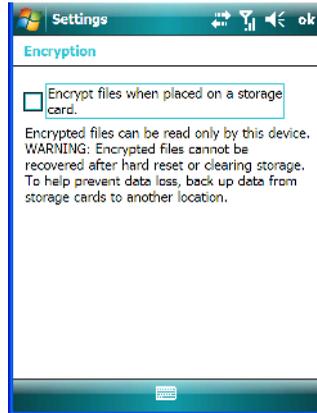
6.20 Error Reporting

Error Reporting allows you to enable or disable Microsoft error reporting prompts.

- Tap on **Start>Settings**. Tap on the **System** tab followed by the **Error Reporting** icon.
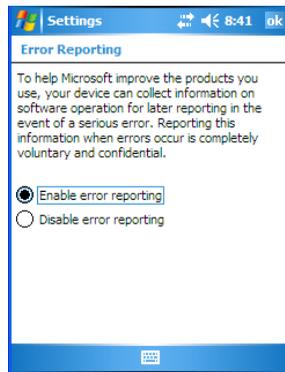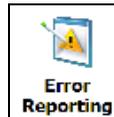
6.21   GPS (Global Positioning System)

With a *Global Positioning System* (GPS) receiver, you can locate your exact position on a map. However, even without a GPS receiver, several different mapping programs can run on your Ikôn.

• Tap on **Start>Settings>System tab>GPS icon.**
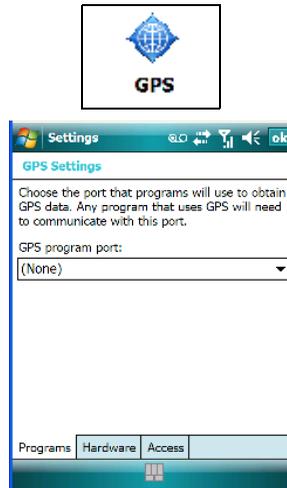
• Tap on the **GPS program port** dropdown menu, and choose the communication (COM) port that the GPS software will use to communicate with the GPS receiver.

Note: Your Ikôn may automatically detect the GPS receiver that you are using and enter the settings in the Hardware tab. If not, you'll need to enter this information yourself. You can find this information in the user manual of the GPS receiver.

- Tap on the **Hardware** tab, and choose a **GPS hardware port** and the appropriate **Baud rate**.
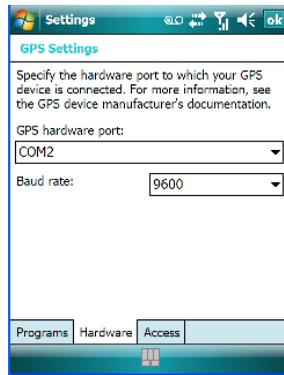
Windows Mobile 6.1 automatically manages access to the GPS receiver. However, some programs may not work with automatic configuration. If this is the case:

- Tap on the **Access** tab, and disable *Manage GPS automatically (recommended)*.
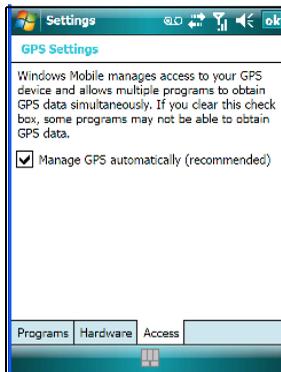
You can go to *www.microsoft.com/pocketstreets* if a map-viewing program is not included with your Ikôn, and copy the file to your Ikôn.

6.22   GPS (Global Positioning System) Settings

This applet allows you to define how the GPS module operates. You can determine when the GPS module can draw power and under what conditions, and choose from a set of GPS profiles built into the modem. You can also set up AGPS (Assisted Global Positioning System).

- Tap on **Start>Settings>System tab>GPS Settings icon**.
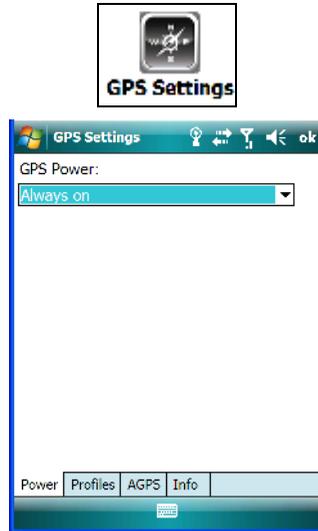
Power Tab

This tab allows you to dictate how the GPS module behaves. The *GPS Power* dropdown menu is used to control when the GPS is powered on and off.

- *Off* – the GPS module is left off, always.
- *Always on* – the GPS module is powered on at all times regardless of the power state of the Ikôn (suspend or standby).
- *On, and off in suspend* – the GPS module is powered on, but if the Ikôn is in suspend mode, the GPS module is turned off.
- *On, and low power in suspend* – the GPS module remains in a low-power state while the Ikôn is in suspend mode.

Profiles Tab
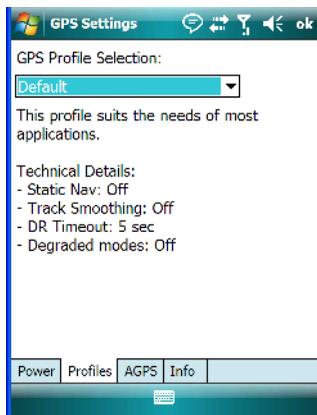
Tapping on the *GPS Profile Selection* dropdown menu allows you to choose an appropriate profile: *Default*, *Automotive* or *Pedestrian*.

- *Default* profile is a good general profile suitable for most uses.

- *Automotive* profile is designed for in-vehicle use, providing quick location updates as the vehicle moves. When the GPS module is set to this profile and the vehicle enters an area such as a tunnel where satellite coverage is interrupted, it *will* attempt to predict the vehicle position.

- *Pedestrian* profile is designed for those using the GPS module while walking. It takes into account the slower pace of the pedestrian when mapping the location of the user. When the GPS module is set to this profile and the operator moves into an area where satellite coverage is interrupted, the GPS module *will not* attempt to predict the operator's movement.

AGPS (Assisted Global Positioning System) Tab
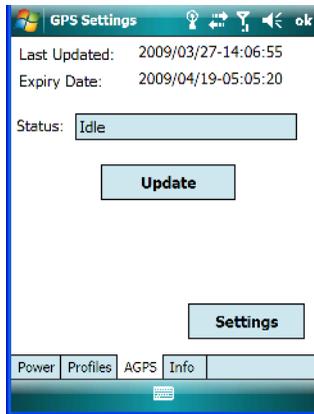
To determine your location, a GPS module receives data from three or more GPS satellites in fixed orbit around the Earth. The GPS module triangulates your location based on the time it takes for signals to get to and from the satellites. This works well in fairly clear areas – outdoors, for example. However, if you're attempting to triangulate your location in city centres where signals bounce off tall concrete buildings or from within a building, the GPS module will have greater difficulty calculating a fix.

AGPS reduces Time To First Fix (TTFF) and increases the likelihood of finding and keeping a fix in poor coverage areas such as indoor sites. AGPS downloads satellite ephemeris (orbital) data to the Ikôn periodically through WiFi or WWAN. The downloaded data is used by the GPS module to speed the process of getting a fix.

Update

- Click on the **Update** button to download *Extended Ephemeris (EE)* files from a secure host on the internet using any interface that has an internet connection (WWAN or WiFi). These files contain several days worth of ephemeris (orbital) data that can be used if the satellite's broadcast ephemeris is not available.

The *Status* field above the *Update* button displays the progress of the download, and once successfully downloaded, the *Status* field will read *Idle*.

Settings

• Click on the **Settings** button to define the *AGPS server connection settings*.
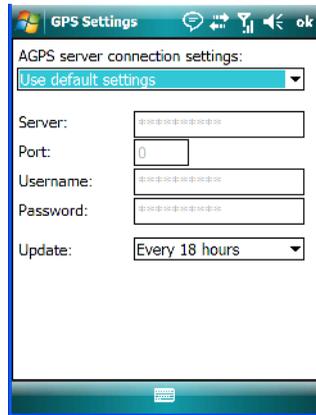
The *AGPS server connection settings* dropdown menu allows you to choose from two settings: *Use default settings* and *Use custom settings*.

The *Use default settings* option is generally acceptable for most applications. Note that aside from the *Update* field in which you can choose how long the fix is stored in your Ikôn, the field values cannot be edited.

The *Use custom settings* option is generally used to configure devices that will have access only to an *intranet* rather than the *Internet* and should only be altered with the assistance of qualified Psion Teklogix personnel. They will be able to help you configure your Psion Teklogix device(s) and web server to retrieve the ephemeris data.

Info Tab
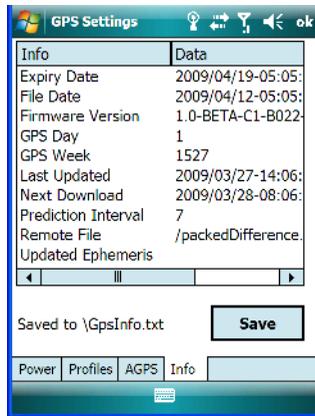
This tab provides general information about the GPS module such as the firmware version, the date on which files were last updated, and so on. If GPS module support service is required, you may be asked to tap on the *Save* button in this tab and forward the information to Psion Teklogix support staff.

6.23   Manage Triggers

Manage Triggers allows you to configure how bar code scanners and other devices are triggered. You can configure the trigger ID for each trigger button for both single- and double-click, and the double-click time.

• Tap on **Start>Settings>System tab>Manage Triggers icon**.
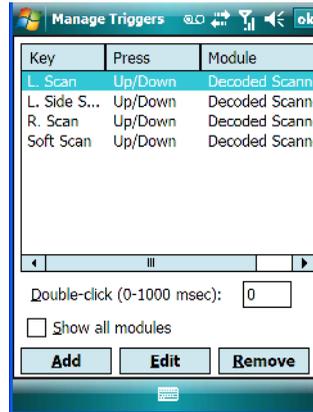
6.23.1 Trigger Mappings

A trigger mapping is an association between a particular key on the keyboard and a driver or application, the module(s) – sometimes referred to as "trigger consumer(s)" – of the trigger source. Along with keyboard keys, trigger sources can also be grip triggers, external hardware triggers or software-based. When the specified key is pressed, the trigger consumer (for example, a decoded scanner) is sent a message.

⚠ *Important: **It is not possible to have two or more identical mappings — for example [F1] cannot be mapped to the Non-Decoded Scanner twice — even if the trigger type is different.***

A keyboard key that is used as a trigger source will no longer generate key data or perform its normal function. For example, if the space button is used as a trigger source, it will not be able to send space characters to applications.

Double-Click

When a key is pressed and released, then pressed again within the configured time (between 0 to 1000 milliseconds), a double-click occurs. See also "Trigger Press Type" on page 162.

Show All Modules

By default, the trigger mapping list only shows active mappings. Mappings for drivers or applications that are not currently active are not normally displayed. By checking this checkbox, all mappings, both active and inactive, are displayed.

Add

Tapping this button brings up the *Add* mapping dialog (see below), so that you can add new trigger mappings.

Edit

Tapping this button brings up the *Edit* mapping dialog, so that you can edit existing trigger mappings.

Remove

Tapping this button removes an existing mapping.

OK

The *OK* button in the top right of the *Manage Triggers* screen saves all changes made. If the [ESC] key is pressed, all changes are discarded.

6.23.1.1 Add And Edit Trigger Mapping

- Tap on **Add** to add a new trigger map, or tap on **Edit** to edit an existing trigger map.
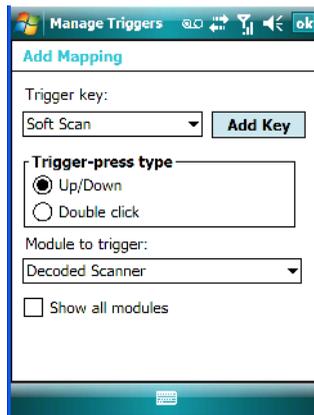
Trigger Key

This dropdown list allows you to specify the source of the trigger events, such as the Grip Trigger, Left Scan, etc., for the *trigger module* selected.

Note: It is possible to map the same source to different modules (trigger consumers) – for example, to both the Imager and Non-Decoded Scanner. If so, both devices/operations will occur simultaneously. This is not recommended in most cases, especially with devices such as Imagers.

It is also possible to map different sources to the same module (trigger consumer).

Add Key

Only existing trigger sources are shown in the Source combo-box. To add a new source to this list, tap on the **Add Key** button. A dialog box pops up, allowing you to select the keyboard key to use as a trigger source.
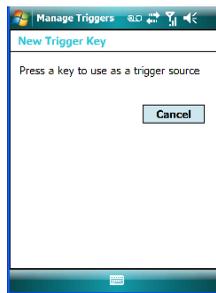
Trigger Press Type

You can enable either an **Up/Down** or **Double Click** response to a trigger press. Normally, when a trigger (keyboard key, etc.) is pressed and released, a "trigger down" event is sent to the "owner" – that is, the application receiving the trigger press information – followed by a "trigger up". If *Double Click* is chosen in this menu, when the trigger is pressed, released, and then pressed again, a "double-click" event will occur. If a mapping with the *Up/down* type has also been configured for the same source, it will only receive the first set of trigger events.

Module To Trigger

This identifies the driver or application receiving the trigger presses.

Show All Modules

By default, inactive owners are not shown. By checking this checkbox, all owners, both active and inactive, are displayed.

6.24   Managed Programs

Managed Programs lets you view, download and install applications that are deployed by the *System Center Mobile Device Manager* (a server-side solution that helps enable IT to have control of their device deployment with respect to security, management and access to the corporate network). To access *Managed Program*:

•   Tap on **Start>Settings>System** tab>**Managed Programs** icon.
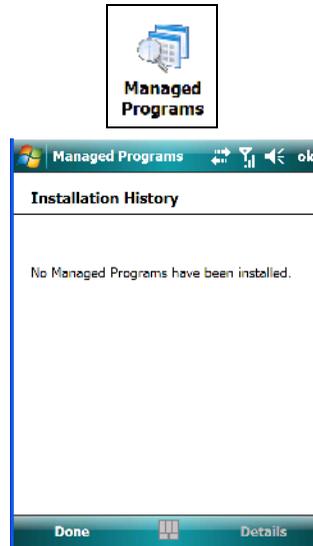
Note: Your system administrator can provide the details you'll need to use Managed Pro-grams effectively.

6.25   Memory

This applet allows you to view memory use and storage card memory allocation. To display the options for this applet:

•   Tap on **Start>Settings**. Tap on the **System** tab followed by the **Memory** icon.

6.25.1 Main Tab
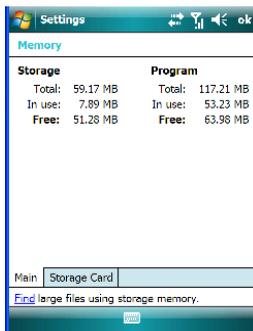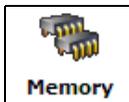
This tab lists the memory allocated for file and data storage and for program storage.

6.25.2 Storage Card

The *Storage Card* screen indicates the total storage card or RAM disk memory along with the amount in use.

6.26 Power Icon

This icon allows you to view and manage battery use.

- Tap on **Start>Settings**. Tap on the **System** tab followed by the **Power** icon.

6.26.1 Battery Tab
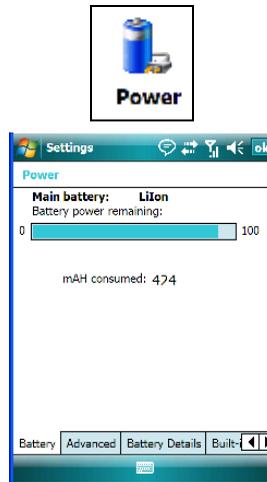
This tab allows you to view the remaining battery capacity.

6.26.2 Advanced Tab
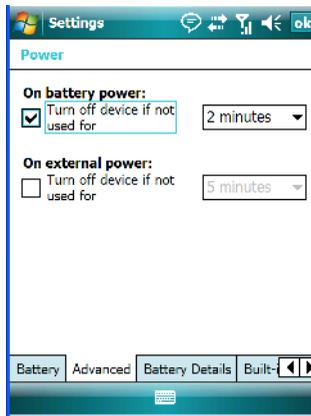
The *Advanced* tab allows you to manage battery consumption.

On Battery Power

When the Ikôn is operating on battery power, this option allows you to determine how long the unit will remain on when it is not in use.

- Tap in the checkbox to the left of **On battery power** to enable this option. Tap in the dropdown menu to choose the number of minutes your unit can remain idle before it shuts down.

On External Power

When the Ikôn is drawing external rather than battery power, this option allows you to determine the number of minutes the unit will remain on when not in use.

- Tap in the checkbox to the left of **On external power** to enable this option. Tap in the dropdown menu to choose the number of minutes your unit can remain idle before it shuts down.

6.26.3 Battery Details
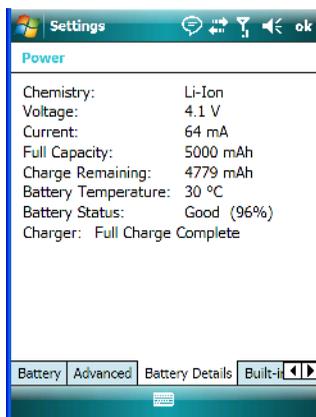
This tab lists the specifications and battery capacity status of the battery installed in the Ikôn. This is a view-only screen.

6.26.4 Built-In Devices
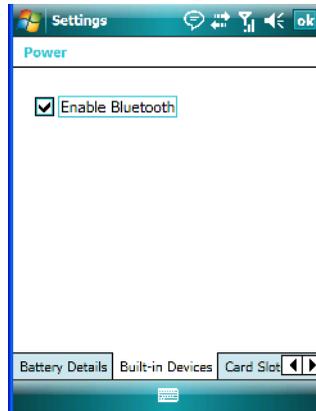
Built-In Devices

Checking the box next to *Enable Bluetooth* switches on the built-in *Bluetooth* radio.

6.26.5 Card Slots
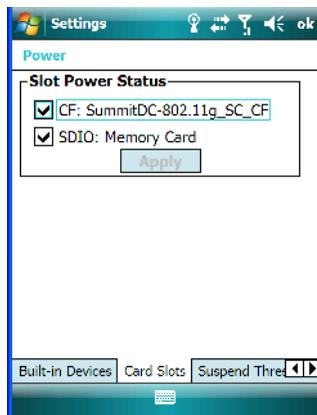
When you select one or more of the card slots listed, power is supplied to the enabled slot(s). Clicking on the *Apply* button activates your selections. Keep in mind that if the characters on this button appear in grey typeface, the checked slots have already been enabled.

6.26.6   Suspend Threshold And Estimated Battery Backup
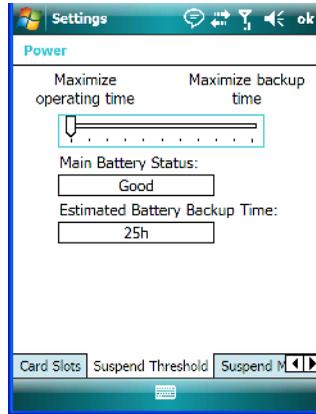
The *Estimated Battery Backup* is the amount of battery power that has been reserved or set aside to protect data until a fully charged battery can be installed in the Ikôn. When the battery capacity is depleted up to the *Estimated Battery Backup* reserve specified in the *Suspend Threshold* tab, the Ikôn shuts off automatically and uses the reserve power to preserve the data stored on the Ikôn. Once the Ikôn shuts down, it cannot be switched on until a fresh battery is installed, or the unit is inserted in a docking station or cradle.

• Slide the **Suspend Threshold** button to the right to increase the battery capacity reserved for backup purposes. Data will be preserved to a maximum of 124 hours.

• Slide the **Suspend Threshold** button to the left to decrease the power reserved for backup purposes; this increases the Ikôn's operating time – the amount of time the Ikôn will operate before shutting down – but reduces the power reserved for backup purposes to a minimum of 24 hours.

Internal super-capacitors will protect the data stored in the Ikôn while the depleted battery is swapped for a fully charged one.

Important: Once the battery is removed, the super-capacitors will preserve the data stored on the Ikôn for approximately 5 minutes. It is critical that you install a charged battery before this time elapses.

6.26.7 Suspend Mode
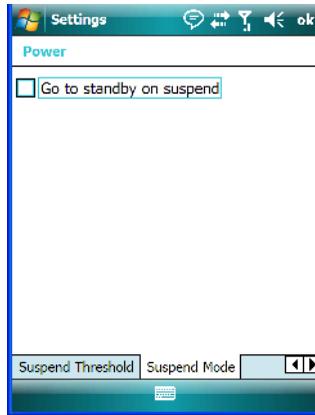
When this option is enabled, any time the Ikôn enters suspend mode (e.g., an idle timeout, Power button press or through the Start menu), *Go to standby on suspend* forces the Ikôn to enter *Standby* mode. In *Standby* mode, applications, processors and services (e.g., Bluetooth) continue to run even while the Ikôn is powered down, making them instantly available when the unit is powered up again.

6.27 Regional Settings

To display the *Regional Settings* screen, tap on **Start>Settings**, and then tap on the **System** tab followed by the **Regional Settings** icon.
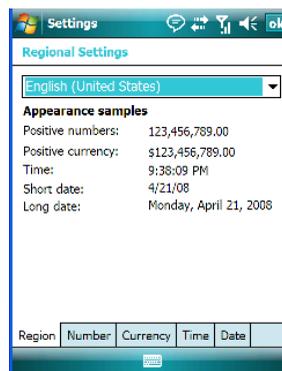
- Tap on the dropdown menu to choose your language and region.

Once you've selected a language and region, you may need to adjust the way numbers, currency, the time and the date appear in your Ikôn.

- Tap on the tab associated with each of the items and choose how each item should be displayed on your Ikôn.

6.28 Remove Programs

- Tap on **Start>Settings**. Tap on the **System tab** followed by the **Remove Program** icon.

Tapping on the *Remove Programs* icon displays a screen listing the programs that can be removed from your unit.

- To remove a program, highlight it and then tap on the **Remove** button.

6.29 Screen Icon

This icon allows you to *align* (calibrate) your touchscreen, turn *ClearType* on and off and adjust the size of the text displayed on the Ikôn screen.

- Tap **Start>Settings.** Tap on the **System tab**, and then tap on the **Screen icon.**
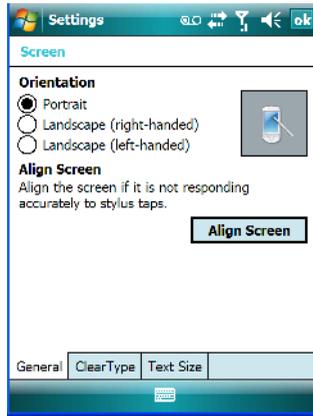
> ⚠️ *Important: Refer to "Aligning (Calibrating) The Touchscreen" on page 45 for details.*

6.30   Task Manager

The *Task Manager* screen lists all running tasks (applications) or processes. This applet provides a number of options to manage these.

- Tap on **Start>Settings**. Tap on the **System** tab and then the **Task Manager** icon – the *Task Manager* screen is opened.
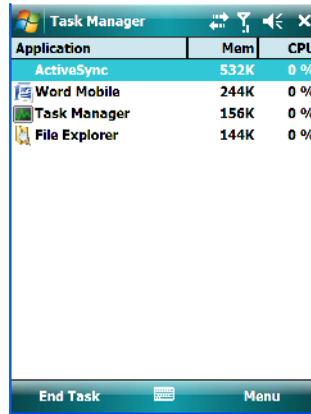
- **End Task:** To shut down an application, **highlight the program** in the list, and tap on the **End Task** softkey in the taskbar at the bottom of the screen.

Task Manager Menu

The *Task Manager* menu provides additional options to help you manage your applications.

- Tap on the **Menu** softkey in the taskbar.
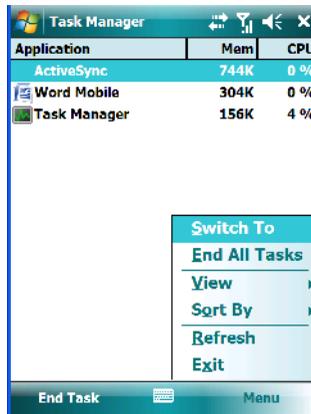
- **Switch To:** Makes the highlighted application active.

- **End All Tasks:** Shuts down all applications listed.
- **View:** Allows you to list either all running applications or all processes.
- **Sort By:** Allows you to sort active applications or processes based on *Memory size*, *CPU* or application or process *Name*.
- **Refresh:** Updates the list of applications or processes.
- **Exit:** Closes the *Task Manager*.

6.31 Teklogix Error Handling Service

- Tap on **Start>Settings**. Tap on the **System** tab followed by the **Teklogix Error Handling Service** icon.
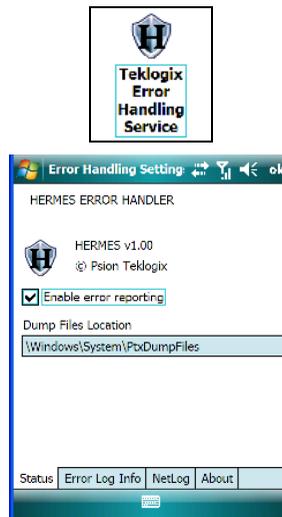
Teklogix Error Handling Service is an error diagnostic tool. Tapping in the checkbox next to *Enable error reporting* enables this service.

6.31.1 ErrorLogInfo

- To log an error, tap on the **ErrorLogInfo** tab.
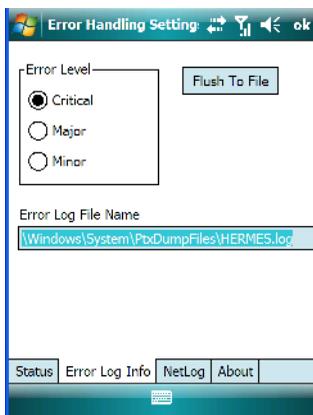
- Choose an **Error Level**, and tap on **FlushToFile** to log the information file.

Psion Teklogix personnel can help you retrieve and forward the information file to our offices.

6.31.2 NetLog
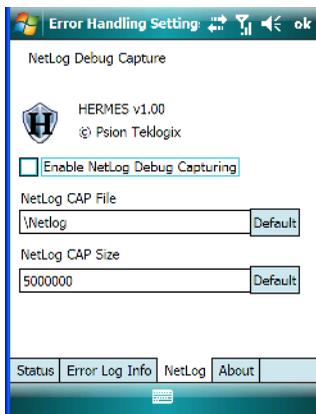
The *NetLog* option is used to log network traffic. When you tap in the checkbox to the left of *Enable NetLog Debug Capturing*, debug data is collected so that, if necessary, it can be forwarded to a Psion Teklogix technician for evaluation. You can also define where you want the data stored and the maximum size of the file.

6.32   Teklogix Imagers Settings

The *Teklogix Imagers* applet is used to create, modify, delete and activate imager settings. The principle uses of the applet are to decode bar codes and to capture images.

Note: This icon is only when displayed when the HHP 5000 imager is installed in your Ikôn PDA.

To launch this applet:

• Tap on **Start>Settings>System** tab, and then tap on the **Teklogix Imagers** icon.
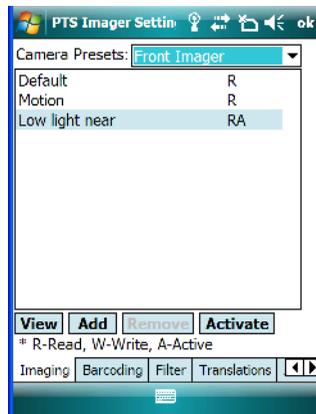
Important: Refer to Appendix C: "Teklogix Imagers Applet" for details about this applet.

A *PTSI Imager* demo applet is also provided to illustrate how the imager works.

To launch the demo:

• Tap on **Start>Programs**, and then tap on the **PTSI Imager** icon.

6.33   Scanner Settings

The *Teklogix Scanners* icon in the *Settings* menu provides access to dialog boxes in which you can tailor bar code options and choose the bar codes your scanner will recognize.

• Tap on **Start>Settings**, and then tap on the **System** tab followed by the **Teklogix Scanner** icon.
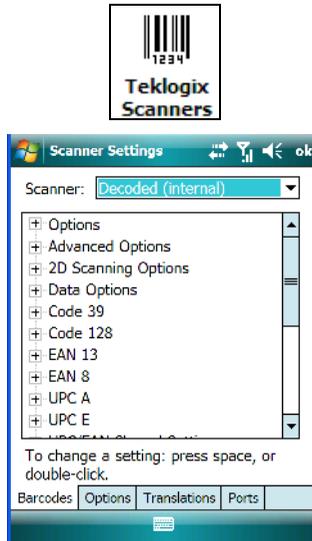
6.33.1 Bar Code Settings – The Scanner Menu

The dropdown menu to the right of the *Scanner* option allows you to choose from one of the following scanner types used with your Ikôn: *Decoded (internal)*, *Decoded (Intermec ISCP)* or *Imager*.

The symbologies listed change to reflect the scanner you choose and the bar codes it supports.

⚠️ *Important: **Appendix D: "Bar Codes Settings" provides descriptions of the bar codes listed in the scanner menus.***

6.33.2   Options Tab

This tab allows you to tailor the double-click parameters and the display options associated with your scanner.
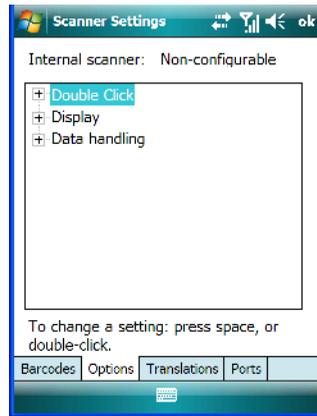
6.33.2.1 Double Click Parameters

Click Time (msec)

This parameter controls the maximum gap time (in milliseconds) for a double-click. If the time between the first and second clicks of the scanner trigger is within this time, it is considered a double-click. The allowable range is 0 to 1000. A value of zero disables this feature.

A double-click produces different results depending on whether or not a value is assigned in the "Click Data" parameter. When a value is not assigned for the "Click Data", double-clicking the scanner trigger overrides the target dot delay set in the "Dot Time" parameter and initiates a normal scan sweep. If a value is assigned for the "Click Data" parameter, double-clicking the scanner trigger inserts the "Click Data" value rather than initiating a scan.

Click Data

For both integrated and external scanners, this parameter determines which character is sent to the application installed in your Ikôn following a double-click. A dialog box appears, asking that you press the key you want to insert. The ASCII/Unicode key value of the key-press is displayed.

6.33.2.2 Display Parameters

Scan Result

When this parameter is enabled, the type of bar code and the result of the scan appear on the screen. Note that this information is only displayed after a successful decode and is visible only while the scanner trigger is pressed. When the trigger is released, this information is cleared from the screen.

Scan Indicator

When this parameter is enabled, the laser warning logo appears on the display whenever the scanner is activated.

Scan Result Time (sec)

The value assigned to the "Scan Result Time (sec)" parameter determines how long the scan results of a successful scan are displayed on the screen. Time is measured in seconds, and a value of "0" (zero) disables the parameter. When you choose this option, a dialog box appears where you can enter a value.

Note: To remove the scan result from the screen before the "Result Time" has expired, point the scanner away from the bar code and press the trigger.

Good Scan Beep And Bad Scan Beep

These parameters determine whether or not the Ikôn emits an audible scanner 'beep' when a good (successful) scan or a bad (unsuccessful) scan is performed. Set these parameters to either *on* to enable the beeper or *off* to disable it.

Soft Scan Timeout

This parameter is used by the SDK "Scan" function (soft-scan: starting a scan session via the SDK function, instead of a physical user trigger press). The value assigned to this parameter determines the soft-scan timeout from 1 to 10 sec. (default is 3 sec.).

Scan Log File

If this parameter is enabled, the input barcode and the modified/translated output bar code are logged in the file \Flash Disk\ScanLog.txt. Keep in mind that if the "Scan Log File" is enabled, there is a slight performance effect when performing multiple scans since the log file is written to persistent storage.

6.33.2.3 Data Handling

This option allows you to choose the code page your Ikôn will use to display data – *Default Local ASCII* or *ISO-8859-1 Latin 1*.

Codepage:

Tapping on this option displays a window in which you can define the code page your Ikôn will use.

If you choose *Default Local ASCII*, the code page of the local OS is used. For example, if the local OS uses double-byte Chinese characters, choosing this option will filter data through the local ASCII of *that* OS and display it accurately, in this example, using double-byte characters.

If you choose *ISO-8859-1 Latin 1*, data will be displayed according to the character mapping of this Latin 1 code page, ignoring the local OS code page.

6.33.3 Translations Tab

The *Translations* tab allows you to define up to 10 cases, each consisting of up to 10 rules in sequential order. Only one case will be applied to a bar code and a case will only be applied if all rules specified in the case are successful – if a rule within a case fails, the entire case fails.
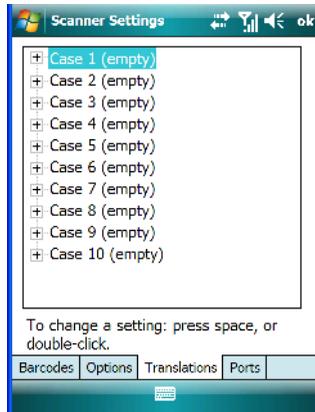
• In the *Translations* tab, tap on a **Case #** to create rules.
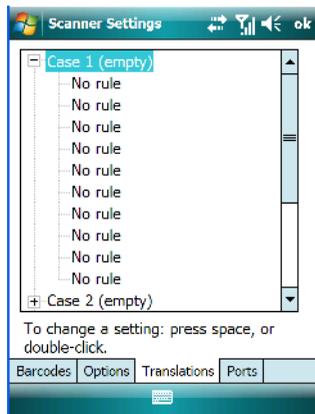
- Tap on the **No rule** dropdown menu to display the rules.
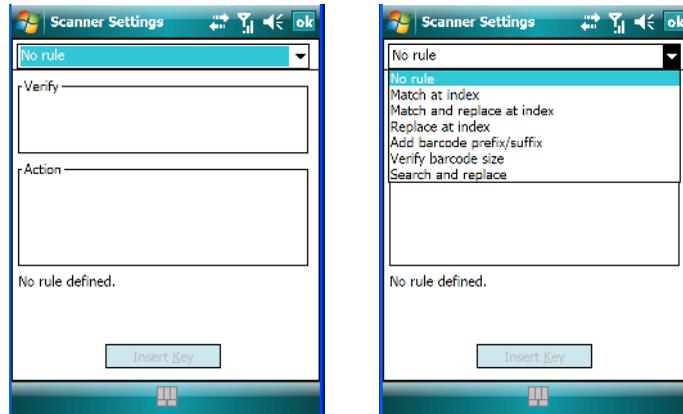
When you choose a rule, an associated screen is displayed in which you can define the rule.
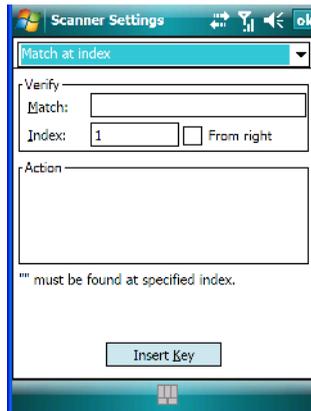
6.33.3.1 Case Rules

The case rules are defined as follows:

- **No rule** – ignored.
- Match at index – matches the match string at a specified index.
- **Match and replace at index** – matches the match string at a specified index and replaces/changes it.
- **Replace at index** – replaces/changes unspecified data in a given range.
- **Add barcode prefix/suffix** – adds a global prefix or suffix.

- **Verify barcode size** – verifies the bar code size. This rule should generally be assigned first, before creating subsequent rules.
- **Search and replace** – replaces all instances of the match string. (Note that this rule cannot fail.)

⚠️ *Warning:* ***Keep in mind that the effects of previously applied rules must be taken into account when creating subsequent rules. For example, if the bar code size is important, it should be checked before any rules that might change the size are applied.***

The information about the status of each case/rule is displayed in the scan log file (see "Scan Log File" on page 179) when enabled. This is useful if a case fails, and you are trying to determine why a rule is failing.

6.33.4 Ports Tab

While you cannot configure the scanner, you can configure communications with a serial decoded scanner using the options in this tab.
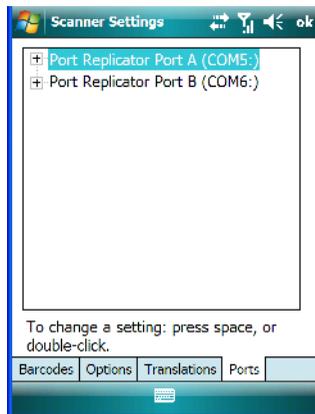
6.33.4.1 Port Replicator Port A (COM5:)
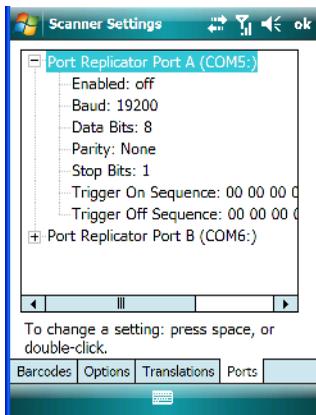
Enabled

This parameter allows you to turn this port *on* (enable) and *off*.

Baud

Double-tapping on this parameter displays a pop-up window in which you can choose an appropriate baud rate.
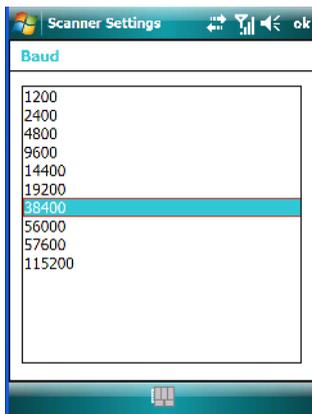
Data Bits

This parameter determines the number of data bits included in each asynchronous data byte. Most devices use 8 bit data bytes. Double-tapping on this option displays a pop-up window in which you can choose either *7* or *8* data bits.

Parity

This parameter determines the type of parity checking used on the data going through the tether port. Double-tapping on this option displays a pop-up window in which you can choose the appropriate *Parity*.

Stop Bits

This parameter specifies the number of stop bits – *1*, *1.5*, *2* – used for asynchronous communication.

Trigger On Sequence And Trigger Off Sequence

If a SICK scanner connected to the Ikôn port requires a serial stream of data bytes to trigger the scanner *on* and another to trigger the scanner *off*, the *Trigger On Sequence* and *Trigger Off Sequence* parameters allow you to define these serial streams.

Double-tapping on *Trigger On Sequence* or *Trigger Off Sequence* displays a screen with a hex array of 10 elements.
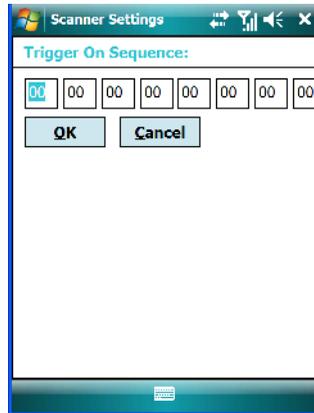
These parameters work in conjunction with *Manage Triggers* sending on and off data streams to the trigger module you assigned. For example, supposed you launch *Manage Triggers* and choose *Decoded Scanner* as the 'module to trigger'. Next, you assign a 'trigger key' – for this example, a period ('.'). To define the serial stream of data bytes to control the *on* and *off* function of the 'trigger key', enter a hex value in the *Trigger On Sequence* and the *Trigger Off Sequence* fields. When you press the trigger key, the *Trigger On Sequence* is sent and when you release the trigger key, the *Trigger Off Sequence* is sent, turning the trigger key *on* and *off*.

6.34   Total Recall

Total Recall is a Psion Teklogix utility developed to back up/restore applications and settings.

Note: In Windows Mobile 6.1, the registry and installed programs are stored in the Flash file system and are not lost on reset. However, in special cases, Psion Teklogix personnel may find it necessary to perform a 'clean start'; this will reset not only the registry settings to factory defaults but will also erase any files or applications stored or installed on the built-in Flash file system, including any Total Recall profiles. This is why any data that needs to be protected must be stored on a microSD card or externally to the device on a USB memory stick or on a PC.

- Tap on **Start>Settings**. Tap on the **Total Recall** icon.
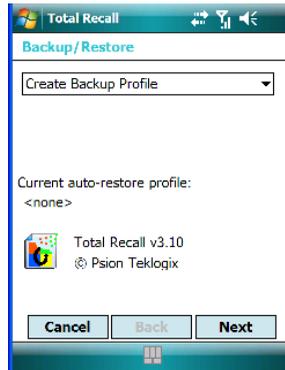
In the dropdown menu, you can choose: *Create Backup Profile, Restore Selected Profile, View Selected Profile Data*, and *Delete Selected Profile*. Keep in mind that until a profile is created, only one option is available–*Create Backup Profile*.

6.34.1 Creating A Backup Profile

- Tap on the **Next** button to begin the process.
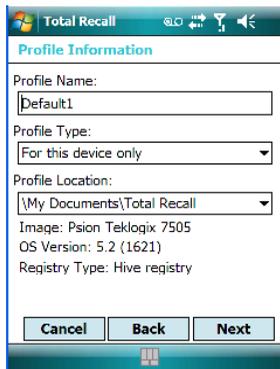
Profile Information

This dialog box lists the possible storage destinations for the profile file.

- To begin, type a name for the profile in the field labelled *Profile Name*.

- Next, choose the *Profile Type* you want to create:
  - *For this device only* – creates a backup that is manually restored by the operator.
  - *AutoRestore for this device only* – creates a profile that automatically restores itself following a cold start.
- Finally, choose a *Profile Location*.
- Tap on the **Next** button to display the next dialog box, *Add Files*.

Add Files
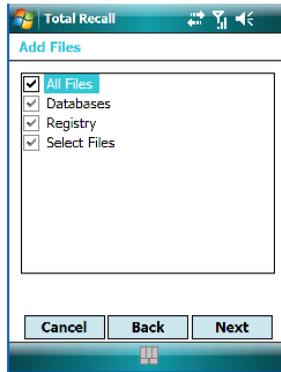
By default, **All Files** is selected so that all installed or copied files, database entries and the registry will be saved. You can, however, limit the backup to Databases, the Registry and/or Selected Files.

- Tap on the **Next** button to view your selections.

View Selections

Depending on what you have selected for inclusion in your profile, you can view a list of all files, selected files, databases, and/or the registry.
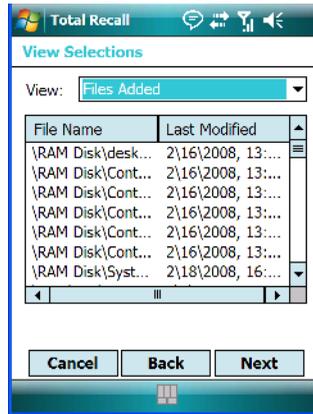
• If you're satisfied with the items in the profile, tap on **Next**.

Performing The Backup
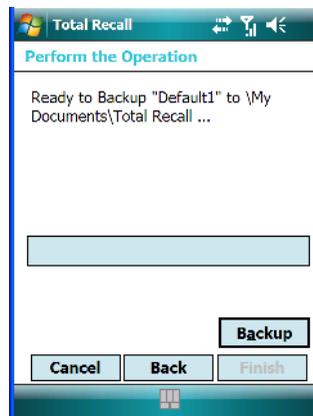
• Tap on **Backup** to begin the process and create a profile.

When the backup is finished, a dialog box is presented stating that the backup has been completed successfully.

• Tap on **Finish** to exit *Total Recall*.

6.34.2   Restoring A Profile
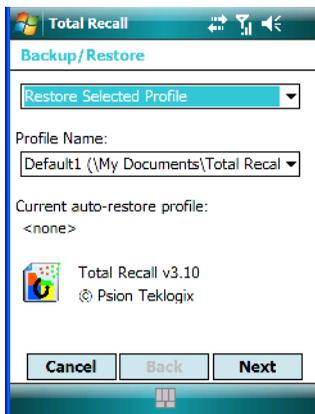
To manually restore a profile:

•   Choose **Restore Selected Profile** from the dropdown menu, and choose the **Profile Name** you want to restore.

•   In the next screen, tap on **Restore** to restore your profile.

6.35   TweakIT
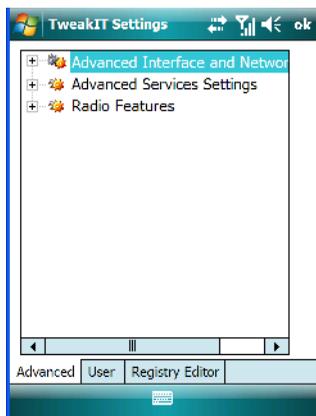
This utility allows you to 'tweak' or adjust *Advanced* system settings (interface, network and servers), *User* settings (font size and docking port message), and provides a *Registry Editor*.

6.35.1   Advanced Interface And Network
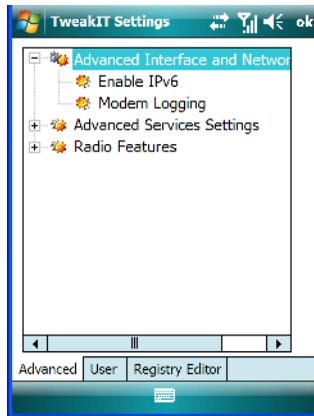
Enable IPv6
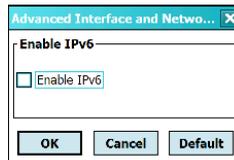
This option allows you to enable Internet Protocol, version 6, that has been published to use 128-bit IP address (replacing version 4).

Modem Logging
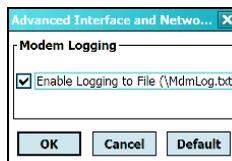
When this option is enabled, the Ikôn logs AT commands (e.g., dial-out information, password string, etc.) that the administrator can monitor for debugging purposes. Modem commands are stored in: \MdmLog.txt.

6.35.2   Advanced Services Settings
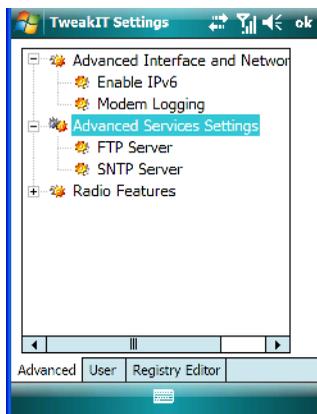
FTP Server
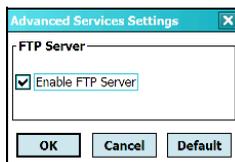
This option is enabled by default to allow file transfers. Keep in mind that data transfer in either direction is restricted to the Temp folder – that is, data are always loaded from the *FTP Server* to the *Temp* folder and from the *Temp* folder to the *FTP Server*.

If this option is disabled, a warm reset must be performed to accept the change.

SNTP (Simple Network Time Protocol) Server
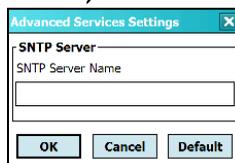
The *SNTP Server Name* typed in this dialog box is used to synchronize Ikôn time with that of the time server. A warm reset must be performed once the server name has been entered.

6.35.3 Radio Features
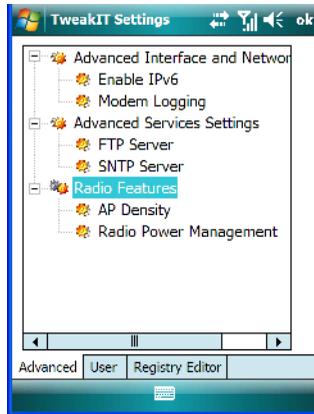
AP Density
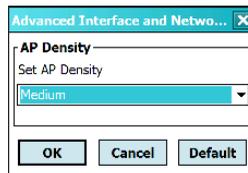
This option allows you to determine the signal strength at which the Ikôn radio will begin searching for a new Access Point (AP): *High*, *Medium* or *Low*. If this option is set to *High*, the radio will begin searching for a new Access Point while still at a fairly strong signal strength. Setting *AP Density* to *Low* will cause the radio to wait until the signal strength is significantly low before attempting to connect to another Access Point.

Depending on your site configuration – for example, the shelving, the Access Point coverage, etc. – a higher setting may improve through-put, increase and maintain signal strength, and reduce missed transmissions.

Radio Power Management
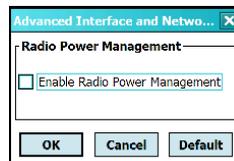
When this option is enabled, access points that support it will use *Radio Power Management* guidelines to control the Ikôn radio. Access points determine how often the Ikôn radio enters

sleep mode when no activity is detected to reduce power consumption. Another benefit is that when *Radio Power Management* is enabled, even when no activity is detected, the access point does not disassociate the Ikôn.

6.35.4 User System Setting
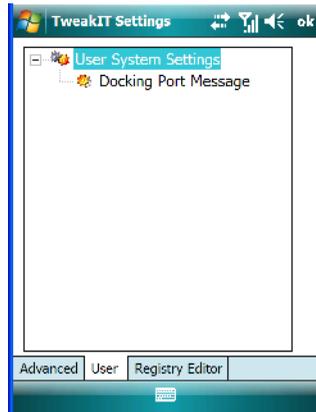
Docking Port Message
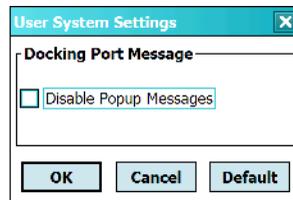
Checking this box blocks the message that normally pops up on the display when the Ikôn is docked.

6.35.5 Registry Editor
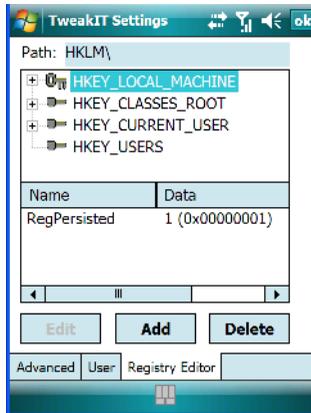
This option is reserved for senior administrators who have a strong understanding of registry keys and values. Careless registry editing can cause irreversible damage to the Ikôn.

6.36 Windows Update

This program checks for software updates, and if found, downloads updates to your Ikôn. You can choose to have updates checked automatically, or if you prefer, you can determine when your unit will check for updates.

6.37 Connections Tab

This tab is used to setup connections using *Bluetooth* and 802.11 radios. If you have the *Windows Mobile 6.1 Classic* operating system installed on your Ikôn, you can also set up Wireless WAN connections. (Keep in mind that the *Wireless WAN* icon not available when *Windows Mobile 6.1 Professional* is installed in your unit.)

• Tap on **Start>Settings>Connections** tab to display your connection options.
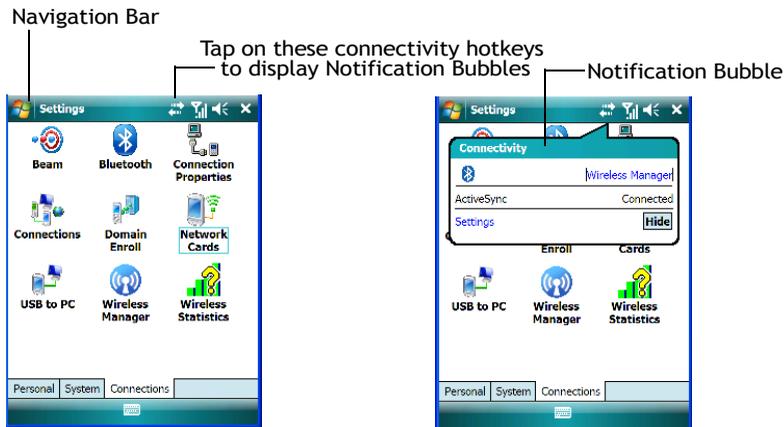
6.37.1 Navigation Bar Hotkeys

Some of the connectivity icons in the *Navigation Bar* along the top of the screen are *hotkeys* that offer shortcuts to connection setups. Tapping on a hotkey displays a bubble that provides information about your connections and provides a shortcut to the *Wireless Manager* applet where you can set up your connections.

Automatic Notification

The *Navigation Bar* also displays *notification* icons to let you know, for example, that a network as been detected. or if your Ikôn is equipped with a phone, that you've missed a call, a voice mail or a text message.

Automatic Network Detection

If a wireless network is available when you switch on your PDA, a *notification bubble* may appear letting you know which networks have been found. You can choose a network from here.

Network Detection
Icon
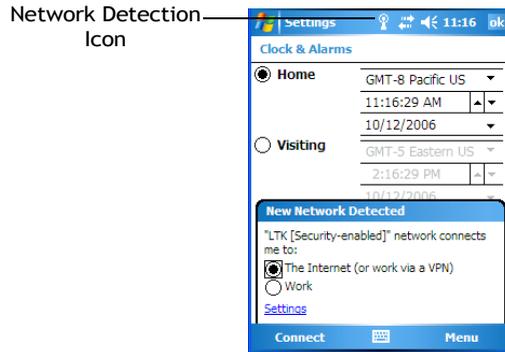
Tapping on *Connect* in the softkey bar at the bottom of the screen will automatically connect to a network that's already been set up. Tapping on *Settings* in the *network bubble* will launch the *Wireless Manager* applet.

If you prefer not see this *notification bubble*, you can tap on the *Menu* button in the softkey bar, and choose not to display the *notification bubble*.

Multiple Notifications

If more than one item is detected, all the items can be accessed by tapping on the small *multiple notification* icon shaped like a word bubble in the *Navigation Bar*. Tapping on it

displays a group of notification icons – in the sample screen below, a *missed call* icon and a *new voice message* icon.

Multiple Notification Icon ⎯⎯⎯⎯⎯⎯

Missed Call Icon ⎯⎯⎯⎯⎯⎯

New Voice Message Icon

Tapping on any of these icons displays an associated *notification bubble* with information about and access to the missed call(s) or voice message(s).

6.38   Beam

This option is not available for the Ikôn Rugged PDA.

6.39   *Bluetooth* Setup

Bluetooth is a global standard for wireless connectivity for digital devices and is intended for Personal Area Networks (PAN). The technology is based on a short-range radio link that operates in the ISM band at 2.4 GHz. When two *Bluetooth*-equipped devices come within a 10 meter range of each other, they can establish a connection. Because *Bluetooth* utilizes a radio-based link, it does not require a line-of-sight connection in order to communicate.

• Tap on **Start>Settings**. Tap on the **Connections tab** followed by the **Bluetooth icon**.

6.39.1 The Devices Tab

This tab allows you to scan for other *Bluetooth* enabled devices, and it allows you to pair devices.

Note: You may need to enable your Bluetooth radio before you begin. Refer to "Bluetooth Mode" on page 202 for details.

To add a new device:

• Tap on **Add new device...**.

The Ikôn scans for a *Bluetooth* device within a 10 meter range. Any *Bluetooth* devices within range appear in the *Bluetooth* list box
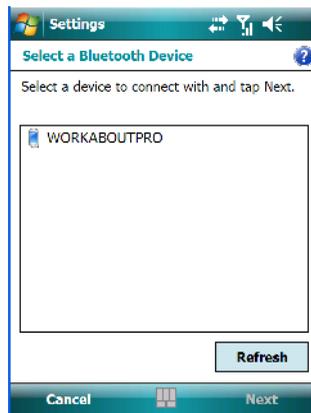
- Highlight the device you want to add. Tap on **Next**.
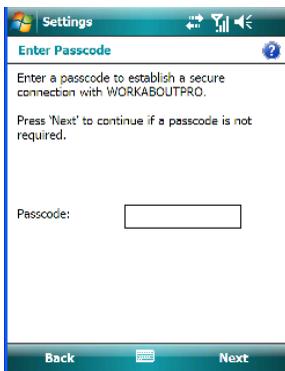
- If required, type your **Passcode**. If not, skip this step and just tap on **Next**.

A pop-up message lets you know that your device has been connected to your Ikôn.

• To change the *Display Name*, tap on the **Advanced** button. This is an *optional* step.
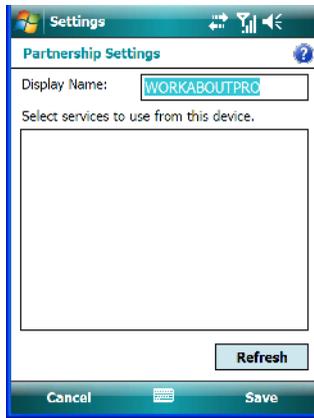
• Tap on **Save**.

Note: To connect to a Bluetooth-equipped device that's already been added, tap on the item in Bluetooth list box.

6.39.1.1 Pairing A Device

If you intend to pair devices (a headset, for example), power on and bring the device within 10 meters of the Ikôn before proceeding with the discovery process described below.

*Important: **Follow the steps under "Pairing A Bluetooth Headset" on page 50 to pair a Bluetooth a headset with your Ikôn.***

If you prefer, you can go to the Today screen, and tap on – Getting Started>Set up Bluetooth – to get pairing information.

6.39.2 *Bluetooth* Mode

- Tap **Start>Settings**. Tap on the **Connections** tab following by the *Bluetooth* icon. Next, tap on the **Mode** tab.
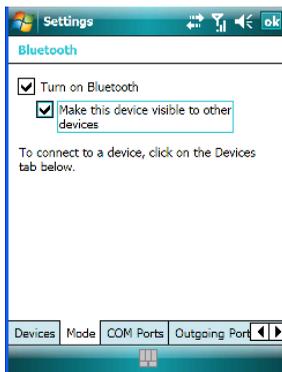
When *Turn on Bluetooth* is checked, *Bluetooth* features are available. If this option is disabled, you cannot send or receive information using *Bluetooth*.

When *Make this device visible to other devices* is enabled, other *Bluetooth* devices within range (approximately 10 meters) can detect your Ikôn and can establish a bond or use a *Bluetooth* service. Note that other devices can detect your unit whether or not a bond has been created.

6.39.3 *Bluetooth* COM Ports
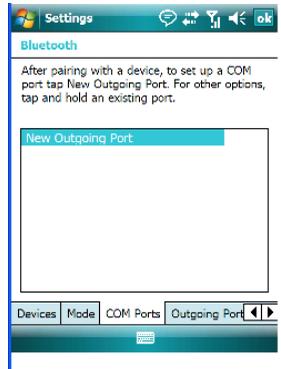
New Outgoing Port

When you pair the Ikôn with another device, *New Outgoing Port* is listed in this dialog box. Tapping on this option allows you to assign an outgoing COM port number.

*   To work with an existing COM port number, tap and hold the stylus on an existing port.

To assign a *new* port number, make certain that your Ikôn is connected to the other device via *Bluetooth*.

*   In the *COM Ports* tab, tap on **New Outgoing Port**.
*   Choose a **COM port number** from the list.

Note: If a port cannot be created, the number you've chosen is already in use. Choose a different port number.

6.39.4 Outgoing Port
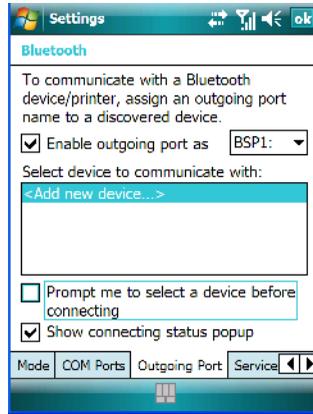
Outgoing Port acts as a serial port that can be used to connect to a list of *Bluetooth* devices (one at a time). This tab allows you to assign and enable an outgoing port and choose the device with which you want to communicate from the list. You can also tailor the behaviour of your Ikôn so that you are prompted to choose the device with which you want to communicate.

6.39.5 Services
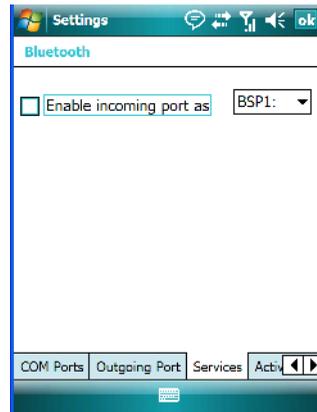
The *Bluetooth Services* tab is used to assign a virtual serial port for incoming *Bluetooth* (serial) communications. Virtual ports are required because while normally, an application uses a true COM (hardware) port to transmit data, *Bluetooth* uses a virtual port.

You can assign either a *BSP* or a *COM* prefix from the dropdown menu. BSP (*Bluetooth* Serial Port) was created by Microsoft to allow *Bluetooth* to have its own serial prefix in order to free up virtual COM prefixes as these are limited and are widely used. (In Windows Mobile 6.1, the *COM Ports* tab is used to assign a virtual outgoing COM port to a Paired *Bluetooth* service, and the *Outgoing Port* tab is used to assign multiple outgoing *Bluetooth* services to a single virtual port.)

6.39.6 Active Connections

This tab displays the currently active *Bluetooth* connections, listing the device name(s). The type of link is also included with the device name(s). Keep in mind that the information listed in this tab is 'view only'; it cannot be edited.

6.39.7   About Tab

The *About* tab displays information about the *Bluetooth* module, such as the manufacturer name, local address and version. Like the *Active* tab, this information cannot be edited.

6.39.8   The *Bluetooth* GPRS Phone

Once you've completed the *Bluetooth* settings, you can go ahead and set up communication through your *Bluetooth*-equipped phone.

Before you begin, make certain that the *Bluetooth* phone is turned on, that the *Bluetooth* radio in your Ikôn and in your phone are switched on, and that the Ikôn and phone are within 10 metres of each other. Both should be discoverable.

1. Tap on **Start>Settings** and then tap on the **Connections** tab.

2. Tap on the **Connections** icon. Tap on **Add a new modem connection**.

3. Type a name for the connection.

4. Tap on the **Select a modem** dropdown menu, and choose ***Bluetooth***. Tap on **Next**.

5. Make certain that the phone is discoverable. Some phones also need to be pairable in order to accept a bonding request. Refer to your phone documentation for additional information.

6. If the phone appears in the *My Connections* list, skip to step 12.

7. In the list, tap **phone** and then tap on **Next**.

8. In the *PIN* screen, type a personal identification number (PIN) – you can enter up to 16 characters.

9. Enter the ***same*** PIN on the phone.

10. If you wish, you can edit the name of the phone in the *Name* field.

11. Tap on the **Finish** button.

12. In the *My Connections* list, tap on the phone and then on **Next**.

13. Enter the dial-up phone number for this connection, and tap on **Next**.

14. In the *User name, Password* and *Domain* fields, enter the logon information for this connection, and tap on **Finish**.

You can begin using the *Bluetooth* phone connection, for example, to send and receive e-mail, browse the Internet with Internet Explorer, and so on.

6.40   Connection Properties

This applet is used to set up serial modem connections.
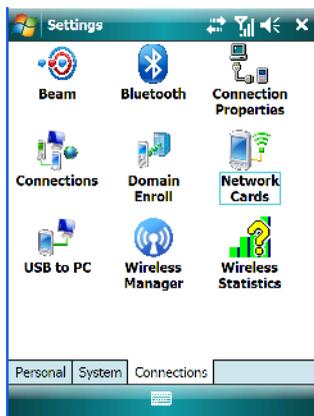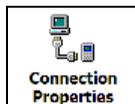
•   Tap on **Start>Settings>Connections tab>Connection Properties icon**
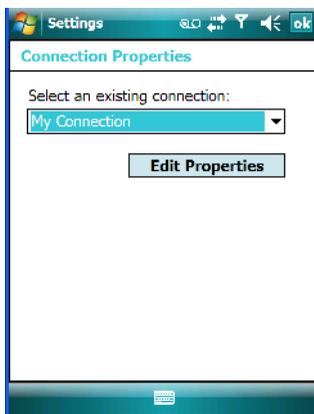
•   Choose a **connection** from the dropdown menu, and tap on **Edit Properties**.

6.40.1 Port Settings
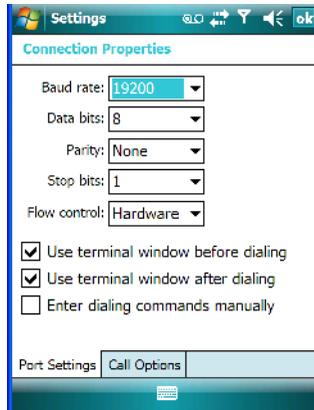
Baud Rate

In the **Baud rate** dropdown menu, choose a new baud rate. Check your modem documentation for the appropriate baud rate.

Data Bits

This parameter determines the number of bits for the data going through this port. Possible values are: *4, 5, 6, 7, 8*.

Parity

This parameter determines the type of parity checking used on the data going through the port. The options are: *none, odd, even, mark* and *space*.

Stop Bits

This parameter specifies the number of stop bits – *1, 1.5, 2* – used for asynchronous communication.

Flow Control

This parameter selects the type of flow control used in your PDA. The Ikôn can perform *Software* or *Hardware* handshaking, or you can choose *None*.

6.40.2 Call Options

Cancel Call If Not Connected Within

Tap in the checkbox to enable this option to make certain that the Ikôn does not stay online too long while waiting to connect with a network.

Enter the number of seconds after which the call will be cancelled.

Wait For Dial Tone Before Dialing

To speed connection when using a modem, disable this option – tap in the checkbox to the left of this option.

Wait For Credit Card

If you are paying for calls with a credit card, enter the number of seconds you want the Ikôn to wait for a credit card prompt.

Extra Dial-String Modem Commands

Type your credit card number in this field.

6.41 Connections – Connecting To The Internet

To activate a connection, make certain that any necessary equipment is installed in your Ikôn such as a radio.

You'll need the following information from your ISP to make an internet connection:

*   ISP server phone number,
*   user name, *and*
*   password.

1. Tap **Start>Settings**, and then tap on the **Connections** tab.

2. Tap on the **Connections** icon.

*Note: In the Connections window, the **Tasks** tab is used to create new connections and manage existing ones. The **Advanced** tab allows you to choose a network. If you need to change these settings, contact your ISP or network administrator before making changes.*

3. Under **My ISP**, tap on **Add a new modem connection**.

4. In the **Select a modem** dropdown menu, choose a modem connection. If you haven't already created a modem connection, refer to "Modem Connection Setup" on page 211.

5. To connect to the Internet, launch the program you want to use. For example, launch Internet Explorer on your Ikôn to browse the Internet. Your Ikôn automatically connects.

Note: To set up a network card or wireless network connection to your ISP, add a new connection under My Work Network.

6.41.1 Modem Connection Setup

Before you begin, you'll need the following information from your ISP or network administrator: telephone number, password, domain name, *and* TCP/IP settings.

If your Ikôn does not have access to a mobile phone network, insert a modem card in the unit.

1. Tap **Start>Settings**. Tap on the **Connections** tab followed by the **Connections** icon.

2. To create a new connection in either My ISP or My Work Network, tap on **Add a new modem connection**.

3. In the *Make New Connection* screen, type a name for the connection.
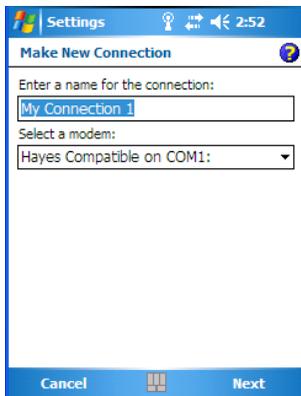
4. In the dropdown menu under *Select a modem*, tap on your modem type.

Note: If your modem is not listed in the dropdown menu, choose Hayes Compatible on COM1.

5. Tap on the **Next** button.
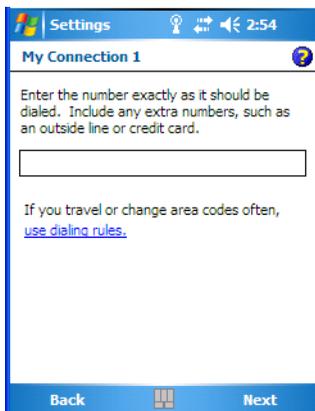
6. In the next screen, enter the phone number *exactly* as you want it dialed. If, for example, you need to dial *9* for an outside line, enter 9 at the beginning of the phone number.
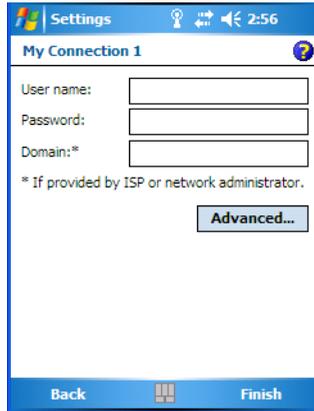
7. Tap on the **Next** button.

8. Type the **User Name, Password** and **Domain Name** as provided by your ISP or network administrator.

*Note: Generally, you will **not** need to change any of the Advanced settings. For information about the Advanced settings, refer to "Advanced Modem Settings"*

Changes to Advanced settings are only required in the following instances:

To change the baud rate settings, dialing string commands or credit card options.

To change port settings.

To enter TCP/IP settings because the server to which you are connecting does not dynamically assign addresses.

9. Tap on the **Finish** button.

If you need to edit the *Advanced* settings, refer to "Advanced Modem Settings" in the next section.

6.41.1.1 Advanced Modem Settings

TCP/IP Settings Tab

If your server assigns IP addresses dynamically, you will not need to change these settings. If you need to make changes, contact your ISP or network administrator for addresses.
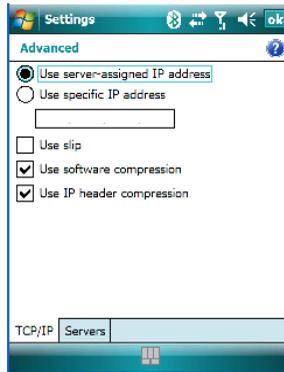
Server Settings Tab

If your server assigns IP addresses dynamically, you will not need to change these settings.
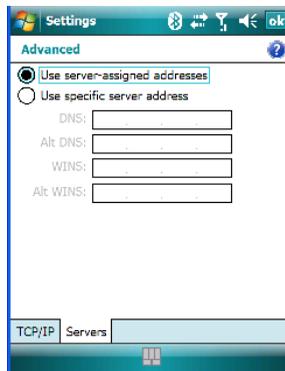
Servers requiring assigned IP addresses may also need a way to map computer names to IP addresses. The Ikôn supports a variety of name resolution options: *DNS*, *Alt DNS*, *WINS* and *Alt WINS*.

Your ISP or network administrator can determine which name resolution you need, and can also provide the server address. In addition, you will want to ask if alternate addresses are available. An alternate address may allow you to connect when the primary server is not available.

6.42   Wireless Manager Icon

The *Wireless Manager* icon acts as a connection manager, providing access to *Wi-Fi*, *Bluetooth*, *GPS* and *GSM/GPRS* settings.

⚠️ *Important: The 'Wireless Manager' option provides detailed Help files to assist you in setting up your Ikôn. Help is available from the Connections tab – not from within the Wireless Manager dialog box.*

To access Wireless Manager help files, tap on Start>Settings>Connections tab. Tap on Start>Help.

• Tap on **Start>Settings>Connections tab>Wireless Manager icon**.
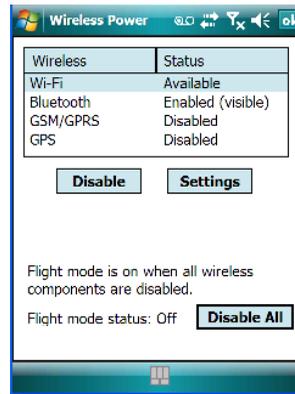
• To access radio *Settings*, highlight a radio in this dialog box, and tap on the **Settings** button.
• To turn off a radio, highlight the radio and tap on the **Disable** button.

6.42.1   Flight Mode – Disabling Wireless Components

To disable all wireless components when, for example, you are taking your Ikôn onto a plane where wireless connections need to be shut down:

• Tap on the **Disable All** button.

To enable wireless components:

• Tap on **Enable All**.

To disable a particular radio connection rather than all connections:

• Highlight an *Available* (enabled) radio listed in this dialog box, and then tap on the **Disable** button.

6.42.2 Setting Up A Network Card

Network (802.11) cards are used to connect to a network so that you can browse the Internet, download e-mail and so on. You can connect to an existing network, or you can set up a new connection on your Ikôn.

⚠ *Important: The Ikôn is equipped with context sensitive Help Files. If you find that you're unsure how to proceed with a network connection at any point during setup, tap on the question mark icon in the navigation bar at the top of the screen.*

6.42.3 Network Adaptor Cards

⚠ *Important: For 802.11b/g (Summit) CF card adaptor setup details, refer to "Setting Up An 802.11b/g Radio–Summit Client Utility" on page 17.*

When the network card is inserted in your unit for the first time, the *Network Settings* screen is displayed automatically so that you can configure the card. If it does not appear, or if you want to change settings:

• Tap on **Start>Settings>Connections tab**.

- Tap on the **Network Cards icon**.
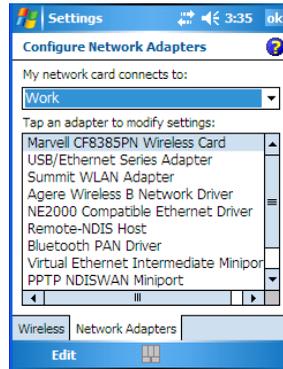
- If you need to specify server information, double-tap on the appropriate **adaptor**, and then tap on the **IP Address** and/or **Name Servers** tab.
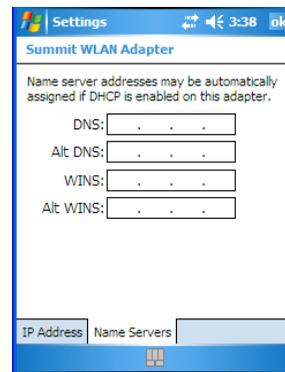
Note: Because most networks use DHCP, you should not need to change these settings unless instructed to do so by your network administrator.

- If necessary, use a network cable to connect the network card to your network. Refer to the documentation shipped with your network card for details.
- To activate the connection, launch the desired program (e.g., Internet Explorer). The Ikôn will connect automatically.

6.42.4 Changing Network Card Settings

- If you use your network card in two locations such as work and home, you'll need to change the network to which the network card connects.

- Tap on **Start>Settings>Connections tab>Network Cards icon**.

- In the *Configure Network Adapters* dialog box, tap on the dropdown menu under *My network card connects to,* choose either **The Internet** or **Work**.

6.42.5 VPN Connection Setup

A VPN connection provides a secure connection to servers through the Internet.

Before you begin, you need the following information from your network administrator: password, domain name, TCP/IP settings and a host name or IP address of the VPN server.

- Tap on **Start>Settings**. Tap on the **Connections tab** followed by the **Connections** icon.

- Under *My Work Network*, tap on **Add a new VPN server connection**.

- In the *Name* field, type a name for this connection.

- In *Host name/IP*, type the **VPN server name** or **IP address**.

- Tap on the **VPN type** radio button next to the type of authentication for your Ikôn: *IPSec/L2TP* or *PPTP*. Your network administrator will let you know which option applies to your PDA.

- Tap on **Next**.

- Choose the **type of authentication** in this screen. If you choose *A pre-shared key*, type the key provided by your network administrator.

- Tap on **Next**.

- Type your **user name, password** and **domain name**. If a domain name was not provided to you, try the connection without entering a domain name.

Note: Normally, you will not need to change any advanced settings. You will need to make changes only under only the following circumstances:

The server to which you are connecting does not dynamically assign addresses, and TCP/IP settings need to be entered.

Server DNS or WINS settings need to be changed.

If you need to edit the *Advanced* settings, refer to "Advanced Modem Settings" on page 214 for details about this tab.

- Tap on **Finish**.

- Launch a program like *Internet Explorer* to activate the connection. The VPN connection will start automatically.

6.42.6   Managing An Existing Connection

Once you've defined a connection, a new option appears in the first Connections screen–*Manage existing connections*.

6.42.6.1 Editing A Connection

- Tap on **Settings>Connections tab**. Tap on the **Connections icon**.
- Tap on **Manage existing connections**.

Tap here ⟶
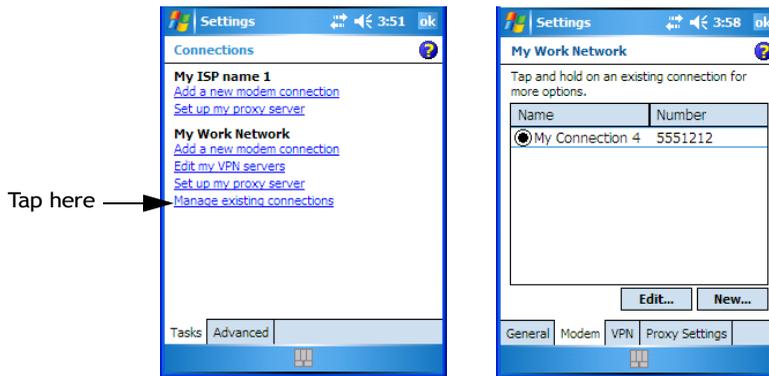
- To launch a connection from this screen, press and hold the stylus on the connection you want to activate. Choose **Connect** from the pop-up menu.
- To delete a connection, press and hold the stylus on the connection you want to delete. Choose **Delete** from the pop-up menu.

*Note: You can also create a new connection by tapping on the **New** button. To make changes to the settings for this connection, tap on **Edit**.*

6.42.6.2 Changing A Connection Setting Name

Your Ikôn has two sets of connection settings: *My ISP* and *My Work Network*. If you want to change one or both of these options to something more familiar to you, follow these steps.

- Tap on **Start>Settings**. Tap on the **Connections** tab followed by the **Connections** icon.
- Under *My Work Network* or *My ISP*, tap on **Manage existing connections**.

- Tap on the **General** tab.
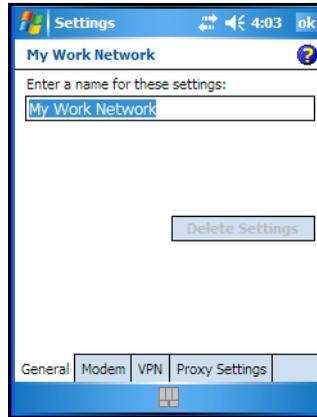
- Type the name you prefer in the field labelled *Enter a name for these settings*.
- Tap on **OK**.

6.42.7 Selecting A Network

⚠ *Important: Normally, you will not need to change these settings. Contact your ISP or network administrator before making any changes.*

Private networks are used for work-related activities. Internet networks are used for home connection to your ISP. The *My Work Network* settings are used for private network connections (corporate networks), while *My ISP* settings are used for Internet network connections.

When you use programs such as *Internet Explorer*, your Ikôn automatically connects using private network settings under *My Work Network* or Internet settings under *My ISP*, depending on specifications. You can determine how your Ikôn connects.

- Tap **Start>Settings**. Tap on the **Connections tab** followed by the **Connections icon**.

- Tap on the **Advanced** tab.
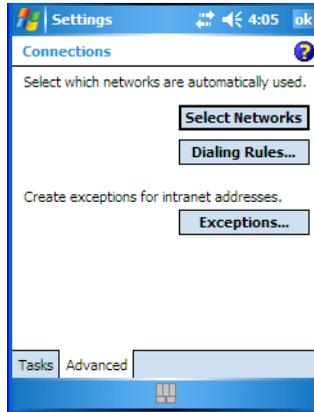
- Tap on **Select Networks**.
- In the appropriate lists, choose **My ISP** or **My Work Network**.

6.42.8 Proxy Server Setup

Note: If you are connected to your ISP or private network during synchronization, the Ikôn will download the appropriate settings during synchronization from your PC. If these settings are not on your PC, or if they need to be changed, you'll need to set up the proxy server connection manually.

To set up the proxy server connection manually, you'll need the following information: proxy server name, server type, port, type of Socks protocol used, and the user name and password.

- Tap **Start>Settings**. Tap on the **Connections tab** followed by the **Connections icon**.

- Under *My Work Network*, tap on **Set up my proxy server**.
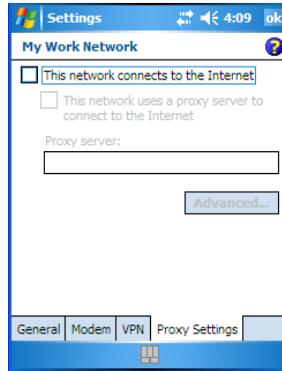
- Add a checkmark next to **This network connects to the Internet** and **This network uses a proxy server to connect to the Internet**.
- In the *Proxy server* field, type the proxy server name.
- Tap on **OK** to save your changes.

*Note: If you need to change advanced settings such as a port number or proxy server type, you'll need to tap on the **Advanced** button rather than tapping on **OK**. Advanced settings are described in "Changing Advanced Proxy Server Settings" on page 222.*

6.42.8.1 Changing Advanced Proxy Server Settings

- To change advanced settings such as the port number or proxy server type, tap on the **Advanced** button.
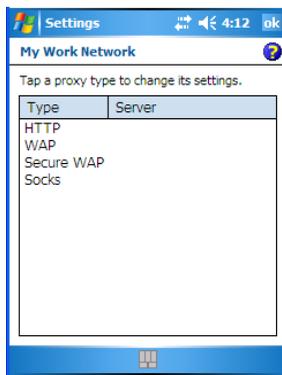
- Tap on the *proxy type* you want to change. For the appropriate server type, type the proxy server name and port.

- Tap on **OK**.

6.43   Wireless Statistics

- Tap on **Start>Settings>Connections tab>Wireless Statistics icon** to display the communication statistics of your wireless connection along with the radio card name, MAC address, driver version and NDIS Compliance information.

- Tap on the **Zero** button to reset the statistics.

6.44   Wireless WAN (Windows Mobile 6.1 Classic Only)

The *Wireless WAN* icon is visible for Ikôns running *Windows Mobile 6.1 Classic*. An Ikôn equipped with a GSM/GPRS, CDMA/1xRTT or UMTS radio has wide area networking *data* transfer capabilities.

6.44.1   Softkey Bar Icons

Wireless WAN icons in the softkey bar indicate the status of your wide area network connection. Note that these icons are only visible when a GSM/GPRS, CDMA/1xRTT or UMTS radio is installed in the unit, and the interface is enabled.

The letter in the signal strength icon (G for GSM/GPRS, U for UMTS and X for CDMA/1xRTT) indicates that a packet data service is available and initialized. Keep in mind that the signal strength icon is displayed without a letter if packet data service is not available or if it is available but not yet initialized.

User interaction is required (e.g. the user is required to enter a PIN).

A non-recoverable (fatal) error has occurred.

GSM/GPRS Status Indicators

Signal strength is between 1% and 20%.

Signal strength is between 21% and 40%.

Signal strength is between 41% and 60%.

Signal strength is between 61% and 80%.

Signal strength is between 81% and 100%.

A GPRS packet data connection is active.

CDMA/1xRTT

Signal strength is between 1% and 20%.

Signal strength is between 21% and 40%.

Signal strength is between 41% and 60%.

Signal strength is between 61% and 80%.

Signal strength is between 81% and 100%.

A CDMA/1xRTT packet data connection is active.

6.44.2 Establishing A Connection

• Tap on **Start>Settings**. Tap on the **System tab** followed by the **Wireless WAN icon**.
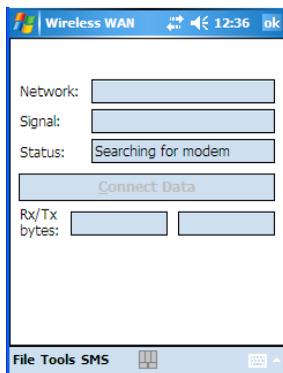
Note: If you are prompted to enter a PIN, refer to "Entering A PIN" on page 225 for details.

The *Status* field indicates when the unit is ready to connect–the *Connect Data* button is enabled.

• Tap on the **Connect Data** button.

The progress of the connection is tracked in the *Status* field.

- PPP link to modem active
- Authenticating user
- User authenticated
- Connected

Note: Keep in mind that these states may be displayed fairly quickly if the progress of the connection is rapid.

When the connection state reaches *PPP link to modem active*, the softkey bar icon changes to indicate an active connection. The *Connect Data* button changes, displaying *Disconnect.*

6.44.3 Disconnecting From A Network

To disconnect from the network:

- Tap on the **Disconnect** button, and then on **OK**.

When the Ikôn network connection is severed, the *Status* field displays *Ready to Connect.*

A unit equipped with a GSM/GPRS expansion board displays the signal strength in the main Wireless WAN screen, even while a connection is active. Units equipped with certain other modems (e.g. Sierra Wireless UMTS and CDMA modems, Novatel UMTS modems) do not display the signal strength while a connection is active.The *Rx bytes* and *Tx bytes* fields estimate the amount of data transmitted and received, respectively.

6.44.3.1 Shutting Down The Wireless WAN User Interface

While it is not usual to shut down the GSM/GPRS user interface, you can accomplish this by tapping on the *File* menu and choosing the *Exit* command in the *Wireless WAN* screen.

Note: Once you've shut down the user interface, you can only enable the radio by tapping on the Wireless WAN icon to display the dialog box.

6.44.4 Advanced Information

In most cases, when a GSM/GPRS radio and SIM are installed in your Ikôn, setup is automatic. Follow the steps outlined under the heading "Establishing A Connection" on page 224 to make a connection. The information in this section is for advanced setup purposes.

6.44.4.1 Entering A PIN

If a PIN is required, a PIN entry dialog box is displayed.

- Type your **PIN**, and press [ENTER].

Note: If you exceed the number of allowable attempts, a PUK entry window is brought to the foreground. You'll need to enter a new PIN number.

Once the correct PIN or PUK is entered or if none was required, the modem is instructed to perform a GSM network registration followed by a GPRS attach. The main *Wireless WAN* dialog box reflects the progress of the initialization.

- Searching for modem
- Initializing modem
- SIM is ready
- Searching for network
- Registered on network
- Searching for packet data
- Ready to connect

If the modem loses the connection to the GSM network, the following states are repeated: *Searching for network*, *Registered on network*, *Searching for packet data* and *Ready to connect*.

6.44.4.2 Error States

The following temporary error states–states that may disappear without interaction– may be displayed:

- Emergency calls only

The modem has found a network but is not allowed to register (e.g. no roaming agreement between networks). The modem keeps searching for another network.

- No network found

A network is not currently available. The modem continues searching for a network.

- Packet data not available

The current network does not support packet data.

- Packet data not allowed

The modem is not allowed to use packet data on the current network (e.g. no packet data roaming agreement between network; a roaming agreement for voice may still be in place). It is also possible that you do not have a subscription for packet data at all.

The remaining error states are permanent:

- SIM is missing

The SIM card is missing. After the SIM has been inserted a reset may be required.

• SIM failure

The SIM card is permanently disabled (e.g. because the wrong PUK has been entered too many times). A new SIM is needed.

• Modem failure

The modem did not respond to commands as expected. If a reset does not clear this condition, the modem may need to be replaced.

• NDIS error

An internal software error has occurred. If a reset does not clear this condition, Psion Teklogix technical support may need to investigate further.

6.44.5 Tools Menu

The *Tools* menu in the main *Wireless WAN* dialog box offers some additional, advanced setup features.

6.44.5.1 Data Connection Configuration
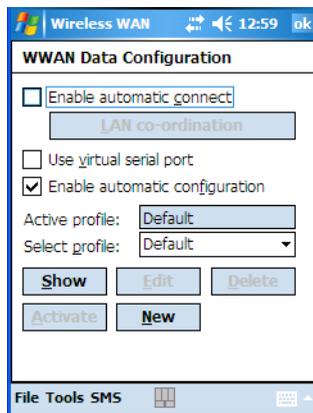
Enable Automatic Connect

If the *Enable automatic connect* checkbox is checked (unchecked by default), the Wireless WAN user interface will attempt to establish a packet data connection whenever packet data is available (e.g. after resume from suspend without further user interaction).

To activate the automatic connection mode:

• Tap on the **OK** button.

While automatic connection mode is enabled, the *Connect Data* button in the main Wireless LAN dialog box changes to *Disable Auto*.

To close the currently active connection (if any) and disable the automatic connection mode:

• Tap on **Disable Auto**.

Important: ***Automatic connection mode should not be used if applications other than the Wireless WAN user interface (e.g. Connection Manager) are expected to open and close connections.***

If the automatic connection mode is enabled and another application closes the packet data connection, the WWAN user interface will immediately try to re-establish the connection.

Use Virtual Serial Port

If *Use virtual serial port* is enabled, packet data connections are established through the virtual serial port of the WWAN driver rather than through the WWAN driver directly. This checkbox should only be checked if certain third-party VPN (Virtual Private Network) clients are used that do not work correctly otherwise. The default setting is disabled (unchecked).

Note: The connection setup takes longer through the virtual serial port.

Enable Automatic Configuration

In most cases, the data connection is configured automatically and no user interaction is required. This is true even if multiple SIM cards from different operators are used with the same device. The connection parameters are adjusted automatically when a new SIM card is detected (this may require a reset). The connection parameters are retrieved from a database.

Manual configuration should be necessary only if:

• One or more parameters in the database are incorrect or a new operator is not yet in the database. (The database should be corrected for subsequent software releases.)

• An operator has assigned individual packet data user names and passwords.

• A very large site has their own APN. Such connections always have to be configured manually.

• A customer has subscribed for a static IP address. By definition this must be configured manually.

⚠️ *Important:* **For CDMA/1xRTT, automatic configuration is not available – connections must be configured manually. Under APN, the packet service access number must be entered (typically "#777").**

In the following section, all the parameters that need to be configured for a connection (such as APN, user name, password, DNS server addresses etc.) are referred to as a profile. Every profile is identified by an arbitrary, unique name. The profile named *Default* is special in that it is always present and can neither be edited nor deleted. (A sample dialog box is presented on the page following.) The *Default* profile uses parameters from a built-in database. The home network (the network that issued the SIM) is used for the database look-up. While there can be many configured profiles, only one profile can be active at any time.

If connection profiles are configured manually then the *Enable automatic configuration:* checkbox should normally be unchecked.

In one particular use case, manually configured profiles may be combined with automatic configuration. If multiple SIM cards are used with the same device, each SIM card being from a different operator and some or all of them requiring a manually set up profile, automatic configuration may be used to automatically pick the correct manually configured profile for each SIM card. For this to work each profile has to be configured while the corresponding SIM card is inserted in the device and initialized (i.e. the status is at least SIM is ready).

The *Select profile* dropdown list in the data configuration profile selects which profile a subsequent action applies to. A profile named *Default* is always present and contains the current parameters from the database. The following actions are available:

• **Show** – The parameters for the selected profile are displayed when you tap on this button. For the *Default* profile, the publicly known password is shown – otherwise, the password is hidden.

• **Edit** – The parameters of the selected profile can be edited when you choose the *Edit* button. Keep in mind that you cannot edit the *Default* profile.

• **Delete** – The selected profile is deleted. You cannot delete the *Default* profile.

• **Activate** – When this button is chosen, the selected profile is made the active profile. Activation is possible only if the *Enable automatic configuration:* checkbox is unchecked.

- **New** – Tapping on the *New* button allows you to create a new profile.
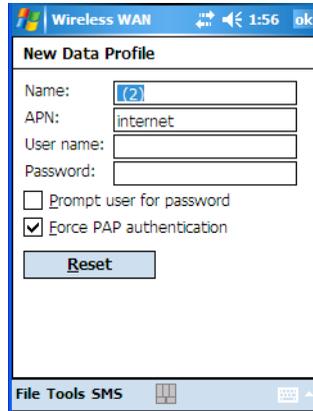
The name of the newly created profile must be different from all existing profiles. Also, the name cannot be *Default*. When the *New Data Profile* dialog box is opened, a proposal for a unique name is filled in the corresponding entry field. If a manually configured profile has a secret password and unauthorized access to the device is a concern even after the SIM PIN has been entered, the password should not be entered in the *New Data Profile* dialog box and the *Prompt user for password* checkbox should be checked instead. In this case, you will be prompted for the password each time a connection is initiated (the *Connect Data* button in the main *Wireless WAN* dialog box is selected).

- **Reset** – The *Reset* button in the *New Profile* and *Edit Profile* dialog boxes resets all entry fields to the values they had when the dialog box was opened.

- **Advanced IP** – The *Advanced IP* button in the *Show Profile* and *Edit Profile* dialog boxes opens another dialog box that allows you to configure a static IP address as well as the IP addresses for the primary and secondary DNS and WINS resolvers.
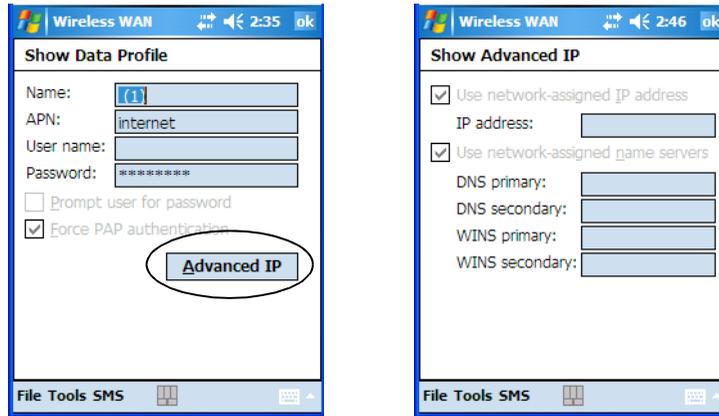
6.44.5.2 Security Configuration

The *Security Configuration* dialog box is called up through the *Tools* menu.

Note: Security configuration is not available with CDMA modems.

The *Security Configuration* dialog box allows you to enable, disable and change the PIN. You will need the current PIN to make any of these changes. The PIN must be enabled in order to be changed. (If the PIN is disabled, the *New PIN* entry field is greyed out.)

Note: Keep in mind that some network operators do not allow the SIM PIN to be disabled. A new PIN must consist of 4 to 8 numeric digits.

The *Require PIN on resume* checkbox is independent of the aforementioned settings. By default, this checkbox is unchecked. While the checkbox remains unchecked, any PIN entered on startup or through the *Security Configuration* dialog box and submitted successfully to the modem is stored in memory for as long as the device is not rebooted. This stored PIN is then used without further user interaction whenever the modem requires a PIN (such as resume after suspend or modem removal). The stored PIN is also automatically entered in the *Current PIN* text box whenever the *Security Configuration* dialog box is called up.

If unauthorized access to the device is a concern, the *Require PIN on resume* checkbox should be checked. In this case, you will be prompted whenever a PIN is required and the PIN is not stored.

6.44.5.3 Network Configuration

Note: Network configuration is not available with CDMA modems.

In the main *Wireless WAN* screen:

• Tap on the **Tools** menu, and choose **Network**.

By default the GSM radio modem automatically chooses from the available and allowed networks (allowed networks are the home network and all other networks with which the home network has a roaming agreement). You may find there are some situations in which you want to override this default behaviour. For example, you may want to disable roaming if you find yourself in a border area where the home network is not available but a foreign roaming partner is available. Abroad, you may find that an available network does not have packet data roaming agreements. In this case, you'll need to manually select the network which you know to support packet data roaming.

Automatic network selection is enabled or disabled by checking or unchecking *Enable automatic network select* in the *Network* dialog box. When automatic network selection is disabled, you must select a network manually.

Available networks can also be viewed without changing any settings. Scanning for available networks is a lengthy operation – a progress bar is shown while the scan is active. For every network that is found, the network name, country, status and numeric network identifier (MCC/MNC, Mobile Country Code followed by the Mobile Network Code) is displayed.

Note: Your home network operator will need to let you know which other networks have roaming agreements. Even when a network is listed with an 'Available' status, it does not necessarily follow that it can be used or that the roaming agreement covers packet data.

A status of 'Forbidden' indicates that the network cannot be used. If you choose a network that is not covered by a roaming agreement, the status in the main WWAN dialog box changes to 'Emergency calls only', 'No network found', 'GPRS not available' or 'GPRS not allowed'.

6.44.5.4 Driver Mode Configuration
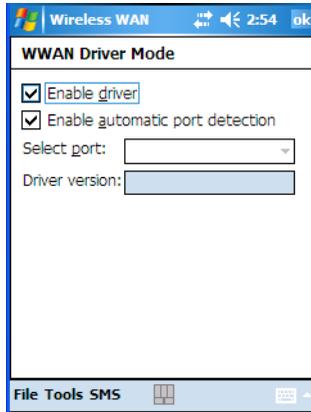
By default, the Wireless WAN driver is enabled (the *Enable driver* checkbox is checked). The driver must be disabled in order to access the modem directly (e.g. dial-up data, fax, or in order to manually submit AT commands to the modem for development, testing, approvals, etc.). In most cases, the Virtual WWAN serial port can be used and it is not necessary to disable the WWAN driver. If the *Enable driver* checkbox is ***not*** checked, the driver is shut down as soon as the *OK* button in the *Driver Mode* dialog box tapped.

If, on the other hand, the Wireless WAN driver is not running and the *Enable driver* checkbox is checked, the Wireless WAN driver is started as soon the *Driver Mode* dialog box is closed using the *OK* button.

Note: When the driver is not running, no network status or signal strength can be displayed.

Since all currently supported modems are automatically detected, the *Enable automatic port detection* checkbox should always be checked. If this checkbox is not checked, a serial port can be selected manually. This experimental feature allows the driver to be used with an internal GSM modem that was not recognized by the automatic detection or an external GSM modem connected to a serial port of the computer through USB or through *Bluetooth*. An external modem connected to a serial port must support 115.2kbit/s, 8bit, no parity and hardware flow control.

6.44.5.5 Modem Information

The fields in this dialog box cannot be edited – they only display information about the Ikôn modem. If the network operator has not programmed a user's phone number into the SIM,

the *Phone* field remains empty. The modem serial number is called IMEI for GSM modems and ESN for CDMA modems.

The SIM ID is sometimes referred to as the ICC ID (International Charge Card Identifier). Not all modems support the retrieval of the SIM ID. In particular, the Novatel Merlin UMTS modems and the Option Globetrotter modems do not support SIM ID retrieval.

If the main menu shows an error status, at least partial modem information may be available.

Modem Power Modes

The power mode of the modem is controlled through the Power icon rather than through the *Wireless WAN* user interface.

To adjust PC Card and CF card modems settings:

• Tap on **Start>Settings**, and then tap on the **System tab** followed by the **Power icon**.

• Tap on the **Built-in Devices tab**.

If the checkbox for a modem is unchecked, power is not applied to the modem and a driver is not loaded (neither the serial port driver nor the Wireless WAN driver). If the checkbox is checked, power is applied to the modem and the drivers are loaded when the Ikôn is turned on. Power is removed from the modem when the Ikôn enters suspend mode.

To enable a modem module that is built into the unit:

• Tap on **Start>Settings**, and then tap on the **System** tab followed by the **Power** icon.

For a modem module that is built into the Ikôn, the settings can be found under the *Built-in Devices* tab. In this case, one of the following power modes can be selected:

• Disabled – No power is applied to the modem and no driver is loaded.

• Enabled – Off in Suspend

Power is applied to the modem and the drivers are loaded when the Ikôn is turned on. Power is removed from the modem when the terminal enters suspend mode.

• Enabled – Always On

When the Ikôn enters suspend mode, the modem remains powered indefinitely.

• Enabled – Keep on for 5 min

• Enabled – Keep on for 15 min

• Enabled – Keep on for 30 min

• Enabled – Keep on for 1 hour

• Enabled – Keep on for 2 hours

When the Ikôn enters suspend mode, the modem remains powered. If the Ikôn is not turned on again during the configured time, the unit briefly wakes up from suspend mode, shuts down the modem, and enters suspend mode again. The default mode is Enabled - Keep on for 1 hour.

At the cost of a slightly increased power consumption in suspend mode, the modes where the modem remains powered during suspend mode have several advantages. When the Ikôn wakes from suspend mode, the modem is ready immediately; modem or network initialization is not required. A packet data session can thus remain active during suspend mode. In these modes, the modem is also able to wake up the Ikôn if the network status changes, or there is a new incoming SMS.

6.44.6 SMS Menu

SMS functions are accessed through the SMS menu. For modems that support a SIM card, the SIM initialization typically takes longer than the network initialization, resulting in a noticeable delay before the SMS functions become available.
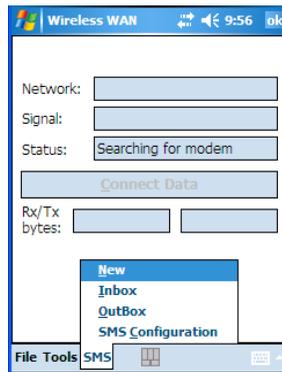
6.44.6.1 New SMS
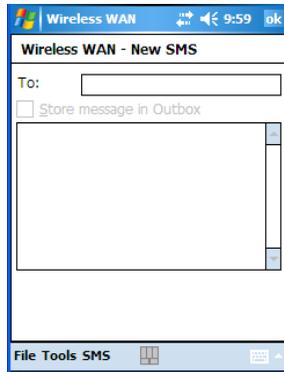
Tapping on *New* opens a dialog box for sending a new SMS message. The recipient's phone number (to be entered in the To field) can consist of the digits 0 through 9, as well as the * and # characters, optionally preceded by one + character, indicating an international number (i.e. the country code follows immediately after the + character).

By checking the *Store message in Outbox* field, a new message can be stored in the *Outbox* before being sent. If no storage space is available or the modem does not support the storage of outgoing messages, this checkbox is disabled.

6.44.6.2 Inbox
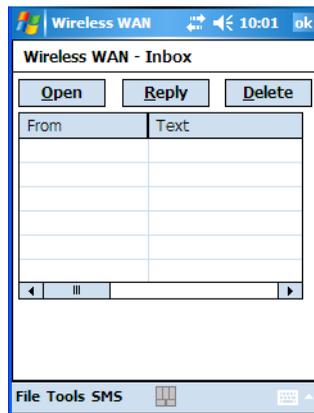
Tapping on *Inbox* opens the list of received messages. Reading 50 messages, for example, from the SIM can take about 30 seconds. By default the list of messages is sorted with the

most recently received message first. The list can be sorted by any other column by clicking on the corresponding column heading.

Clicking the same column heading twice reverses the sort order. Pressing any letter or digit moves the highlight to the next message whose address begins with that letter or number.

Note: The date and time formats can be changed through the Regional Settings in the Control Panel. For a new date or time format to take effect, the Inbox has to be closed and re-opened.

The *Open* button opens the selected message in a new window such that the entire message can be read including the original formatting (line breaks are replaced by spaces in the Inbox message list). Pressing the *Reply* button opens the new message dialog as described above, except the destination phone number is already filled in. Pressing the *Delete* button erases the message.

6.44.6.3 Outbox
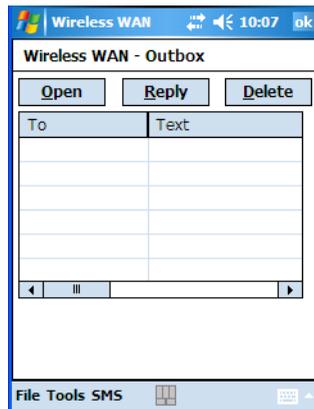
Tapping on *Outbox* opens a list of sent messages. Otherwise the *Outbox* behaves exactly as the *Inbox* described above. The date and time when a message was sent is not available for GSM modems.

6.44.6.4 SMS Configuration

Tapping on *SMS Configuration* opens the SMS configuration dialog. The *SMS Centre Address* follows the same rules as the recipient's phone number in the *New* message dialog. The *Message Validity Period* parameter is sent to the SMS Centre with each message sent subsequently and instructs the SMS Centre on how long it should attempt to deliver the message to the recipient (the SMS Centre may impose an upper limit on the validity period regardless of the setting).

Note: Only certain discrete validity period values can be sent and thus, the validity period is rounded to the nearest allowed value. The next time the SMS configuration dialog is opened, the rounded value is shown.

The user interface tries to keep the SMS storage location available for a new incoming message if the *Delete oldest message when full* checkbox is checked. In this case, when a new message arrives and the SMS storage becomes full, the oldest received message is deleted. If any string is entered as the *Message Suppression Prefix*, messages beginning with that string will not be shown in either the *Inbox* or *Outbox*. In this way, messages intended for another application running on the same device can be hidden.

6.45   Windows Update

This program checks for software updates, and if found, downloads updates to your Ikôn. You can choose to have updates checked automatically, or if you prefer, you can determine when your unit will check for updates.

7.1   Carrying Accessories

There are a variety of carrying accessories to help the operator work safely and comfortably with the Ikôn.

Carrying Accessory	Model Number
Hand Straps	CH6021 (with stylus and tether)
Protective Carrying Cases	CH6090 leather pouch (non-functional access to DC port, includes belt clip)
	CH6095 leather case (fully functional access to all Ikôn features, includes belt clip)
Stylus Tether Kit	CH6020 (stylus, tether and Velcro retainer)

Important: *Do not use adhesives such as Loctite to secure screws on carrying accessories. These chemicals may damage the plastic casing.*

7.1.1   The Hand Strap With Tether – Model No. CH6021

The hand strap with tether can be attached to the back of the Ikôn to provide a secure means for operators to carry the PDA.

Attaching The Hand Strap

The hand strap is attached by fixing the ends of the strap to the anchors located on the back and bottom of the unit (see Figure 7.1 on page 244).

Figure 7.1 Attaching The Hand Strap

Hand Strap Anchor

Bottom of Ikôn

Back of Ikôn

Velcro Tab

Elastic Stylus Holder

Velcro Pad (Underneath)

Eyelet for Tether

Leather

Buckle

Velcro

Elastic Strap

Velcro Pad

Plastic Loop

Bracket

Screws M2 x 4
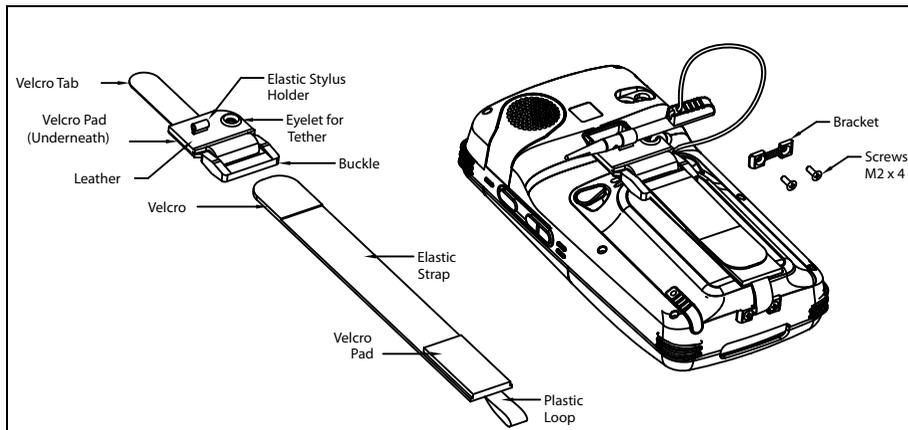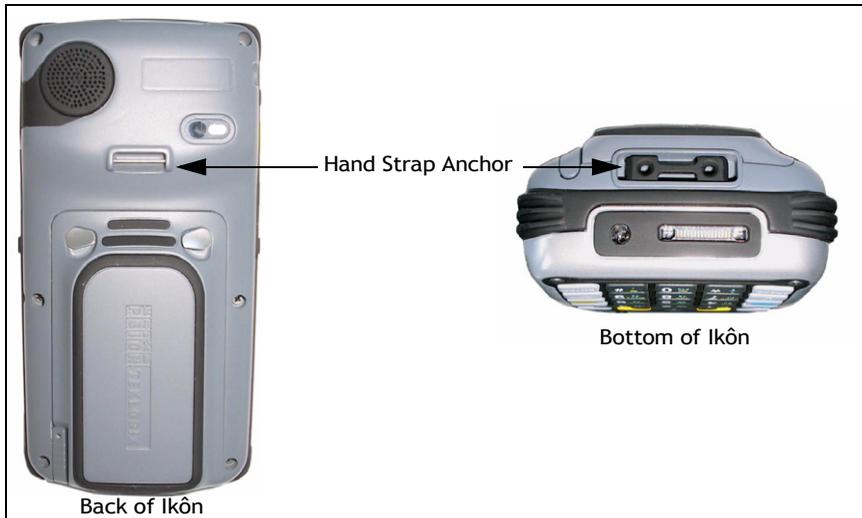
1. Attach the hand strap to the Ikôn by looping the Velcro tab around the pin and adhering the tab to the Velcro pad.
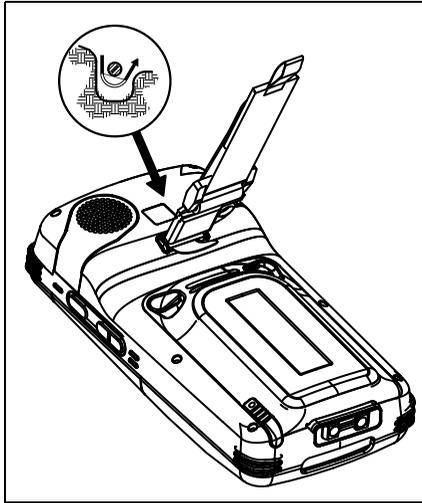
2. Remove the bracket and screws from the Ikôn.
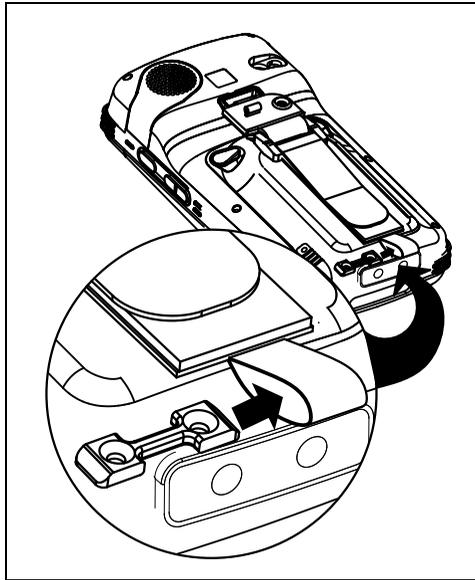
3. Slide the bracket through the plastic loop on the hand strap and install the screws.
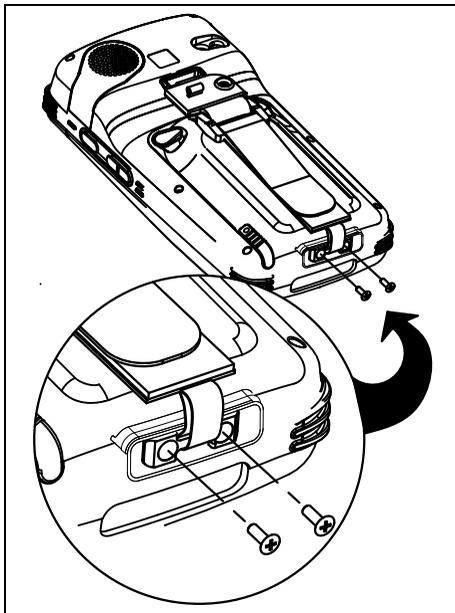
4. Adjust the hand strap by pulling up the Velcro tab and readjusting to your hand as needed.

Attaching The Stylus Tether To The Hand Strap

The stylus tether can be attached to the hand strap at the back of the Ikôn.

1. If not assembled, thread the tether cord through the stylus as shown, pulling the cord tight.
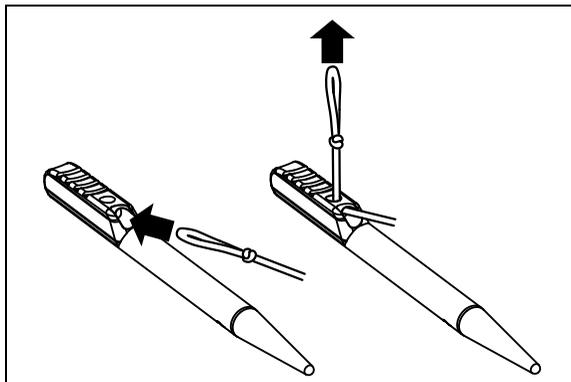
2.   Thread the tether through the eyelet on the strap.
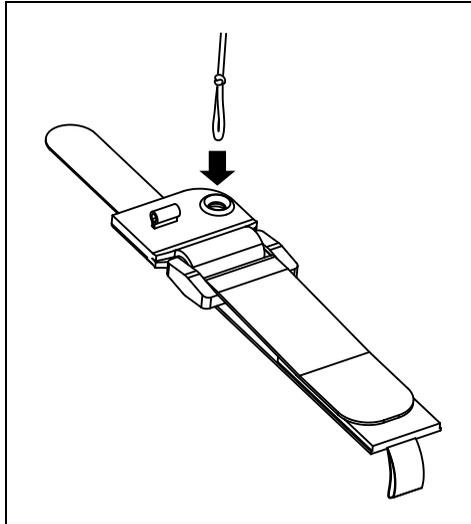
3.   Pass the stylus through the tether loop and pull the tether snug.
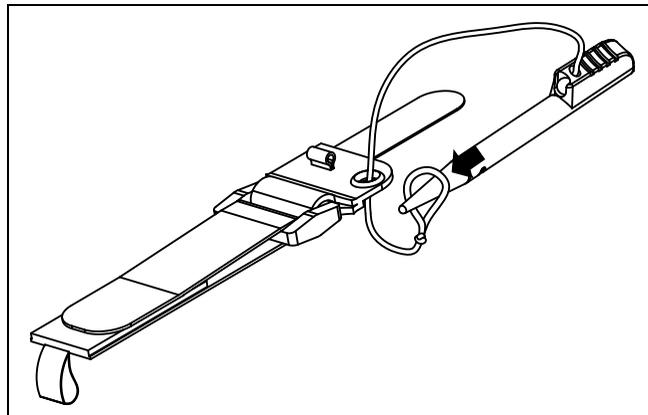
4. Slip the stylus into the elastic holder, and you're finished.
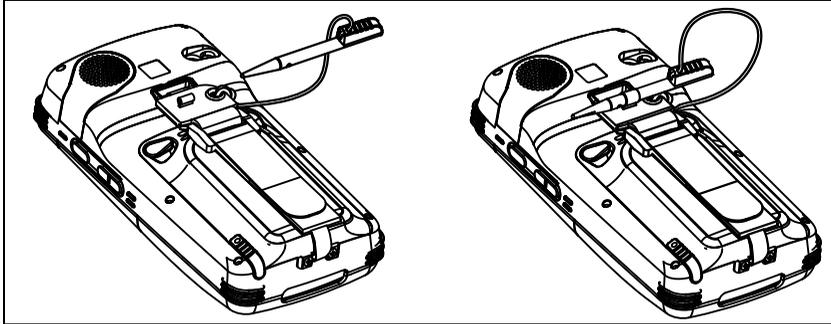
7.1.2   Attaching The Tether – Model No. CH6020

The tether can be installed to the back of the Ikôn to provide a secure means for attaching the stylus to the PDA.

Figure 7.2 Attaching The Tether
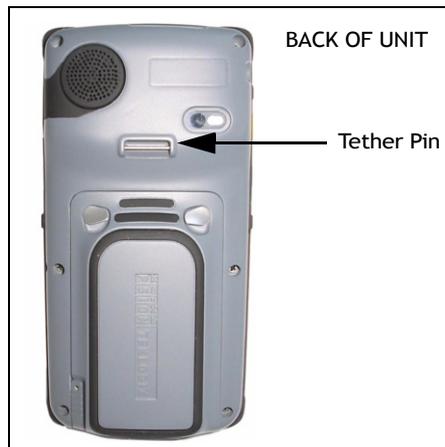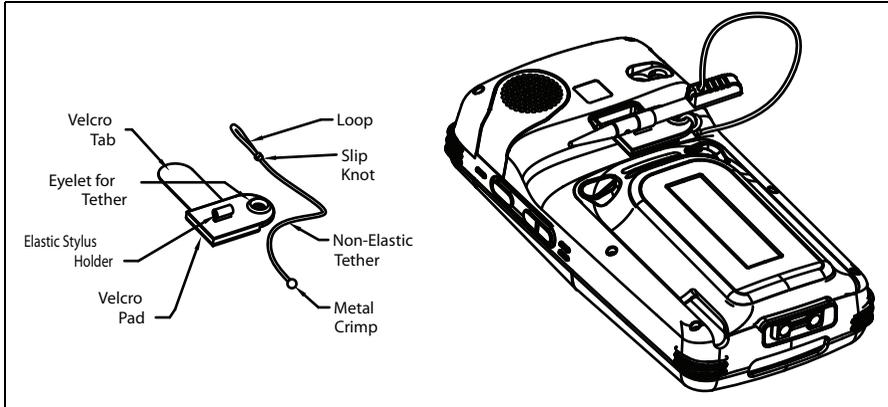
Attaching The Velcro Retainer

Attach the retainer to the Ikôn by looping the Velcro tab around the pin and adhering the tab to the Velcro pad.
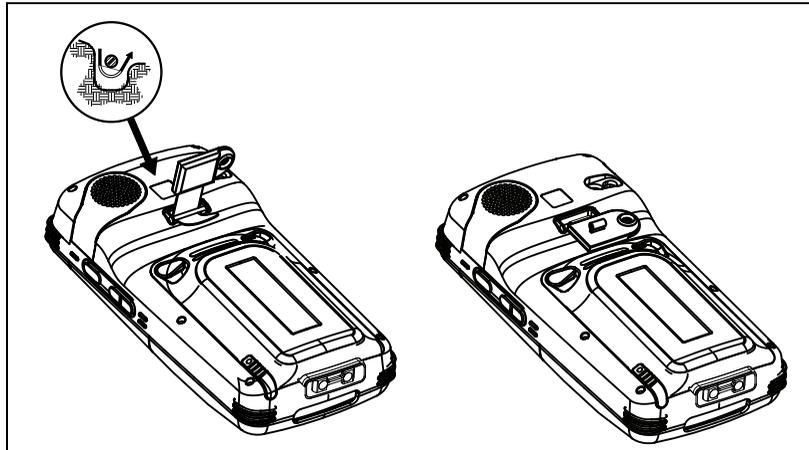
Attaching The Stylus Tether To The Retainer

1. If not assembled, thread the tether cord through the stylus as shown, pulling the cord tight.
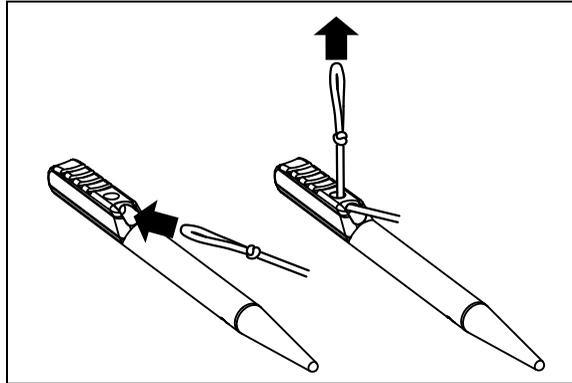
2. Thread the tether through the eyelet on the strap.
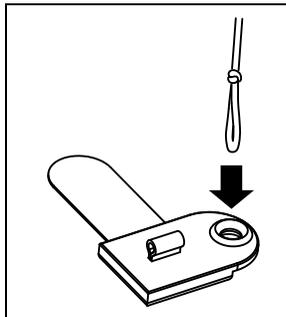
3. Pass the stylus through the tether loop and pull the tether snug.
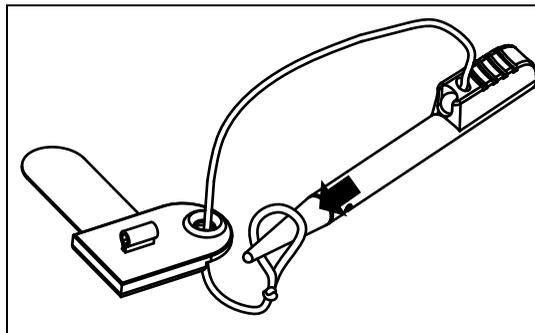
4.   Slip the stylus into the elastic holder, and you're finished.
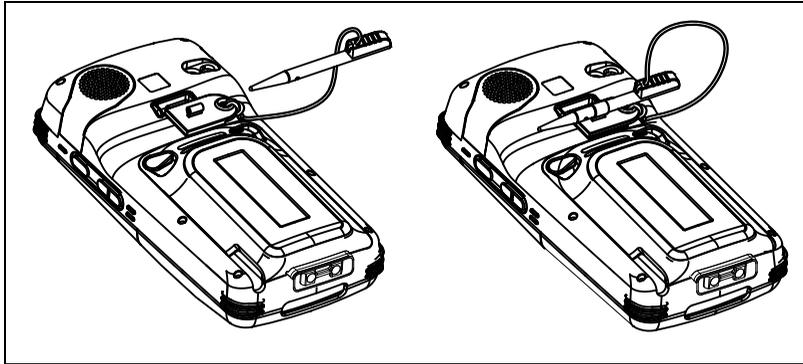
7.1.3   Protective Carrying Cases

Two leather carrying cases are available for Ikôns to shield it from damage. The Model No. CH6090 pouch fully covers the Ikôn; the Model No. CH6095 case provides full access to the Ikôn screen and keyboard for functionality.

7.2   The Battery

The Ikôn operates with a 5000 mAh, Lithium-Ion battery pack.

Note: For information about inserting, removing and charging the battery, refer to "The Battery" on page 36. For battery specifications, refer to "Lithium-Ion 5000 mAh Battery Specifications" on page 291.

7.3   Adaptor Cable Options

The following are adaptors can be ordered for your Ikôn:

Model Number	Adaptor Cable Description
CA1033	Tether to USB Host.
CA1032	Tether to USB Device. (For ActiveSync)
WA4010 - G1	USB to Ethernet adaptor.
CH1050	Power cable used with quad docking station CH4004.

7.4   Chargers And Docking Stations

⚠️ *Important: **Keep in mind when ordering a charger or docking station, you must also order the appropriate power cord separately.***

Psion Teklogix offers a variety of chargers and docking stations for the Ikôn. These include:

- AC Adaptor – Model PS1050 - G1
- Automotive Power Adaptor – Model CH3050
- Desktop Docking Station – Model CH4000
- Quad Docking Station – Model CH4004

7.4.1   Important Safety Instructions

- Before using the AC adaptor, CH4000 Desktop Docking Station, or CH4004 Quad Docking Station, read all instructions and markings on the housing.
- Use the AC adaptor, batteries, and other attachments recommended or sold by Psion Teklogix.
- The mains power cord (sold separately) shall comply with the national safety regulations of the country where the equipment is to be used.
- These docking stations cannot be used with non-Ikôn PDAs. Although they may share the same battery terminating connector, they are designed with different applications in mind.
- Do not operate the AC adaptor with a damaged cord or plug. Replace immediately.
- Do not disassemble the AC adaptor; it should be repaired by qualified service personnel. Incorrect reassembly may result in electric shock or fire.
- To reduce the risk of damage to the electric plug and cord when unplugging a docking station, pull the plug rather than the cord.
- Make sure the cord is positioned so that it is not stepped on, tripped over, or otherwise subjected to damage or stress.
- Do not operate the AC adaptor, the CH4000, or the CH4004, if it is struck by a sharp blow, dropped, or otherwise damaged in any way; it should be inspected by qualified service personnel.
- To reduce the risk of electric shock, unplug the AC adaptor from the outlet before attempting any maintenance or cleaning.
- An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in fire or electric shock. If an extension cord must be used, make sure:

- The plug pins on the extension cord are the same number, size, and shape as those on the adaptor.

- The extension cord is properly wired and in good electrical condition, and that the wire size is larger than 18 AWG.

• Do not expose the AC adaptor to rain or snow. However, both the CH4000 and CH4004 are designed to accept a wet Ikôn Rugged PDA without harmful effect.

• Do not place batteries in the docking stations if they are cold—temperatures below 0°C (32°F). Allow them to warm up to room temperature for at least 30 minutes.

• Do not use a docking station if after an overnight charge, the battery feels warmer than the charger housing. The dock should be inspected by qualified service personnel.

• Do not use a docking station if the battery, while charging, becomes more than lukewarm.

7.4.2 Installation: Chargers And Docking Stations

When installing a charger or docking station, consider the following guidelines.

• Keep chargers and docking stations away from excessive dirt, dust and contaminants.

• Chargers will not charge batteries outside an ambient temperature range of 0° C to 40 °C (32° F to 104° F). It is recommended that the charger or docking station be operated at room temperature–between 18° C and 25° C (64° F to 77° F) for maximum performance.

After unpacking your unit:

• Visually inspect the charger for possible damage.

• Install the IEC power cord and apply power.

7.4.3 Power Consumption Considerations

Check to ensure the mains circuit supplying chargers and/or docking stations is adequate for the load, especially if several chargers and docking stations are being powered from the same circuit.

• Quad docking station can consume up to 1.9A @ 120 VAC or 1.5 A @ 240 VAC.

7.5   Desktop Docking Station – Model No. CH4000

⚠️ ***Important:*** ***The CH4000 desktop docking station is shipped with its own user manual. It is critical that it be reviewed for additional information and updates.***

📖 *Note: To preserve battery integrity, the desktop docking station will proceed with a charge only when the battery temperature falls between 0° C and 40° C (32° F to 104° F).*

The CH4000 desktop docking station is a desktop model designed to:

- Fast charge the internal battery.
- Fast charge the spare battery pack (see Figure 7.3 on page 255)
- Supply Type A and Type B USB connectivity to the Ikôn (see Figure 7.4 on page 257).

The CH4000 storage temperature is -30° C to +60° C (-22° F to 140° F). Operating temperature and humidity are: 5 - 95% non-condensing and 0° C to 40°C (32° F to 104° F).

The desktop docking station provides sufficient power to concurrently support all the above functions. The CH4000 uses careful charge algorithms designed to maximize battery life while ensuring the shortest possible charge time. The charger supports proprietary Psion Teklogix Smart Batteries and handles a range of voltages and charge algorithms. See "The Battery" on page 36 for battery capacity, charge times and battery life for the Ikôn battery. See "Charging A Spare Battery" on page 256 for spare battery charge information.

Figure 7.3 CH4000 Desktop Docking Station – Front View

> ⚠️ *Important: This docking station can only be used to charge Psion Teklogix approved Lithium-Ion batteries.*

7.5.1 Operator Controls

The CH4000 has one operator control – the USB door on the rear that switches from Type A to Type B (see "Operating The USB Dock" on page 256).

7.5.2 Indicators

The CH4000 desktop docking station is equipped with a single LED on the front panel that indicates the charge status of the spare battery.

7.5.3 Operation

7.5.3.1 Charging The Ikôn Battery

The CH4000 supplies DC power to enable the Ikôn internal fast charger. Normally, it takes 2.5 to 3.0 hours to charge the 5000 mAh battery installed in the Ikôn.

When the Ikôn Rugged PDA is installed in the dock, the battery charge LED on the Ikôn (the left-most LED) lights up to indicate the unit has external power and may charge the internal battery. The Ikôn charge LED follows the same convention as the CH4000 docking

station LED. Refer to "Charging A Spare Battery" in the next section for details about LED behaviour.

Note: Battery charging continues whether the Ikôn is switched on or off.

7.5.3.2 Charging A Spare Battery

Note: Do not store a spare battery in a charger for more than 72 hours. Doing so may damage the battery or reduce its charge capacity.

• Insert the spare battery in the charge well at the back of the CH4000, aligning the contacts on the battery with the contacts in the spare battery charge well.

A full charge takes 2.5 to 3.0 hours for the 5000 mAh battery.

When the battery capacity reaches 95%, the LED turns solid green and remains in this state once the battery is completely charged.

7.5.3.3 Operating The USB Dock

The CH4000 Desktop Docking Station offers a rear-mounted host or device USB connection to the Ikôn. The Ikôn supports communication with low- and full-speed USB 1.1 compliant devices and hosts through the docking station. The Type B receptacle may be used for ActiveSync® among other applications typical for a Type B device (Figure 7.4 on page 257).

• Move the sliding door to the left or right to alternate between the Type A and Type B USB ports.

Figure 7.4 CH4000 Desktop Docking Station Rear View
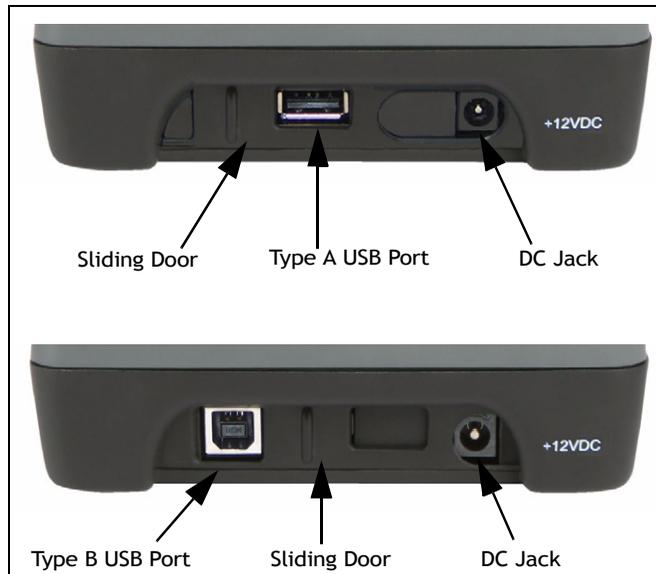
Linking An Ikôn To A PC

The desktop docking station can be connected to a PC so that you can exchange files in the same way that you would between PC drives. A USB cable is included with your docking station.

Note: For details about data transfer through Windows XP and ActiveSync and through Vista, refer to "Data Transfer Between The PC & The Ikôn" on page 14.

To link the Ikôn to a PC:

- Insert the Ikôn in the desktop docking station.
- Insert the USB cable into the docking station Type B USB connector. Attach the other end of the cable to a USB port on the PC.

7.5.4   Cleaning The CH4000

 Important: ***Do not immerse the unit in water. Dampen a soft cloth with mild detergent
to wipe the unit clean.***

- Use only mild detergent or soapy water on a slightly damp cloth to clean the CH4000.
  Avoid abrasive cleaners, solvents or strong chemicals for cleaning. The plastic case is
  susceptible to harsh chemicals. It is partially soluble in oils, mineral spirits and gasoline
  and slowly decomposes in strong alkaline solutions.
- To clean ink marks from the label, use isopropyl alcohol.

7.5.5   Troubleshooting

7.5.5.1   Docking Station Does Not Power On

- When first connected to the DC power supply, the spare charger LED should turn ON
  and remain on for 3 seconds. If this does not occur, the charger is defective and requires
  service.

7.5.5.2   Ikôn Charge Indicator LED Stays Off

When an Ikôn is docked into a powered CH4000 and the Ikôn charge indicator LED stays
off, there may be a problem with the unit or with the docking station. Use an Ikôn with a
properly functioning charge indicator to isolate the problem.

7.5.5.3   Ikôn Charge LED Fast Flashes Green

If the Ikôn charge LED (the left-most LED) fast flashes green when it is docked:

- Remove the Ikôn and disconnect the adaptor DC power cable.
- Wait at least 20 seconds, and then plug the cable in again.
- If the Ikôn LED still shows a fault, the Ikôn requires service.

7.5.5.4   Dock Battery LED Fast Flashes Green With Battery Inserted

- Try inserting a battery that has been tested in another charger and is known to work.
- If the spare charge slot LED continues to fast flash green with the known working bat-
  tery, the charger is defective and requires service.
- *Your Psion Teklogix battery and desktop docking station are carefully designed for
  safety and capacity performance in accordance with IEEE 1725. If the battery or
  charger are not Psion Teklogix approved products, or the safety mechanism is faulty, the
  spare charge slot LED or Ikôn LED will rapidly flash green.*

7.5.5.5 Dock Battery LED Does Not Turn On When Battery Is Inserted

• Inspect the charge slot contacts for damage. Are they bent, flattened, twisted or broken?

• Reinstall the battery and check that it is fully seated in the slot.

• Try inserting a battery that you know to be working in the charger slot.

• Disconnect and reconnect the DC adaptor, and check that the spare battery LED indicator flashes at power-up.

• If the charge slot fails to charge the known working battery, it is defective and requires service.

7.6 Quad Docking Station – Model No. CH4004

⚠ *Important: The CH4000 desktop docking station is shipped with its own user manual. It is critical that it be reviewed for additional information and updates.*

The CH4004 Quad Docking Station is a desktop model designed to accept up to four Ikôn Rugged PDAs. The docking station powers the Ikôns and their internal battery charger. The docking station also connects from one to four Ikôns to a 10/100 Base-T Ethernet network and allows for Ethernet data transfer.

Figure 7.5 CH4004 Quad Docking Station Front View

7.6.1 Operator Controls

The CH4004 has no operator controls or power switch.

7.6.2 Indicators

The quad docking station is equipped with two rear Ethernet LEDs and no front LEDs.

7.6.3   Quad Dock Operation

7.6.3.1   Charging The Ikôn Battery

- Insert the DC power MINI FIT JR plug into the CH4004 rear DC input receptacle. The adaptor LED should be ON when powered from the mains.

The CH4004 supplies DC power to enable the Ikôn internal fast charger. Normally, a full charge of the 5000 mAh Ikôn battery will take from 2.5 to 3.0 hours.

- Insert up to four Ikôns into the docking station charge wells, pressing down gently but firmly to seat them securely.
- During the charge, the Ikôn LED slow flashes green.
- When the battery capacity reaches 95%, the LED turns solid green.

Note: Battery charging continues whether the Ikôn is switched on or off.

7.6.3.2   Connecting To The Ethernet Network

The rear-mounted RJ45 connector incorporates LEDs that indicate data traffic (see Figure 7.6) when:

- The Ikôn is in the docking station and powered on;
- The docking station is powered by the AC adaptor;
- The docking station is connected to Ethernet network with a Category 5 cable plugged into the RJ45 rear socket.

The green Link LED flashes to indicate the presence of data traffic. The yellow Speed LED is steady ON when the network is 100 Mbps and OFF when the network is 10 Mbps.

Figure 7.6 CH4004 Quad Docking Station Rear View
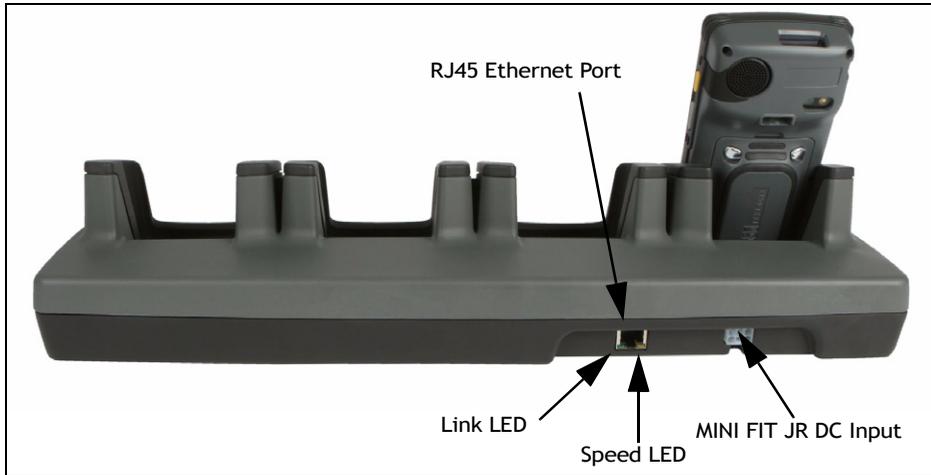
Network Access

The Ikôn automatically detects insertion into the docking station and loads the appropriate drivers to communicate with the network.

Network Addressing

The host application uses standard TCP/IP protocol to name, locate and communicate with a specific Ikôn on the network.

If a link is established between an Ikôn and a host, the application on the host and on the Ikôn must have a recovery mechanism in the event that the Ikôn is removed from the dock, interrupting the link.

7.6.4 Cleaning The CH4004

> *Important: Do not immerse the unit in water. Dampen a soft cloth with mild detergent to wipe the unit clean.*

• Use only mild detergent or soapy water on a slightly damp cloth to clean the CH4004. Avoid abrasive cleaners, solvents or strong chemicals for cleaning. The plastic case is susceptible to harsh chemicals. The plastic is partially soluble in oils, mineral spirits and gasoline. The plastic slowly decomposes in strong alkaline solutions.

• To clean ink marks from the label, use isopropyl alcohol.

7.6.5   Troubleshooting

7.6.5.1   Ikôn Charge Indicator LED Stays Off

When an Ikôn is docked into a powered CH4004 and its charge indicator LED stays off, there could be a problem with the Ikôn or with the docking station. Use an Ikôn with a properly functioning charge indicator to isolate the problem.

7.6.5.2   Ikôn Charge Indicator LED Fast Flashes Green

If the Ikôn charge indicator fast flashes green when the Ikôn is in any of the four sites:

• Remove the Ikôns and disconnect the adaptor DC power cable.
• Wait at least 20 seconds, and then plug the cable in again.
• If the Ikôn indicator still shows a fault, the Ikôn requires service.

7.6.5.3   Green LED OFF When Connected To A Network

• Check the Category 5/5e cable. Replace if the cable is suspect.
• Contact your network administrator.

7.6.5.4   Yellow LED OFF When Connected To A 100Base-T Network

• Check the Ethernet cable. Replace if the cable is suspect.
• Contact your network administrator to ensure the network is running at 100 Mbps.

7.6.5.5   Powered Adaptor LED Stays Off

• Check the AC cable. Replace with the same type if the cable is suspect.
• If the adaptor's LED stays OFF, the adaptor is defective and requires service.

7.7   AC Wall Adaptor – Model No. PS1050-G1

The AC wall adaptor available for your Ikôn allows you to operate your Ikôn using AC power while charging the battery inserted in the unit.

Adaptor plugs suitable for use in the following countries are shipped with the AC wall adaptor: United Kingdom, Switzerland, Japan, Israel, Australia, Europe, and North America (see Figure 7.7 on page 263).

Figure 7.7 AC Wall Adaptor Plugs
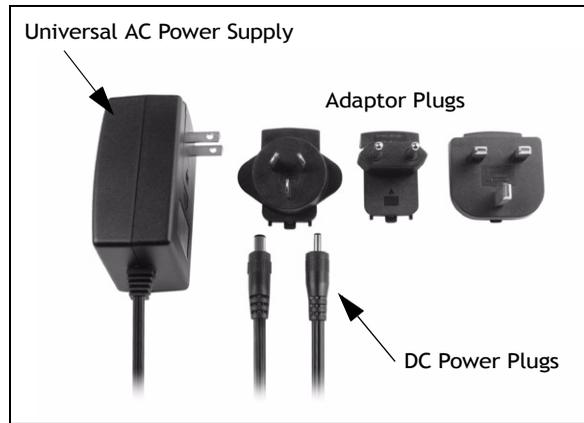
- Choose the adaptor plug that is suitable for use in your country. Slide the adaptor plug into the Universal AC power supply, snapping it into place. These two pieces, coupled together, are referred to as an AC wall adaptor.
- Insert the DC power plug into the DC IN port at the base of the Ikôn, located between the tether and LIF ports.
- Plug the pronged end into an AC outlet.

7.8   Automotive Power Adaptor – Model No. CH3050

Important: It is critical that you review the safety instructions outlined in the quick start guide enclosed with your automotive power adaptor before using the accessory.

The automotive power adaptor allows you to power your Ikôn and recharge your battery using power drawn from your vehicle's automotive power outlet.

Figure 7.8 Automotive Power Adaptor
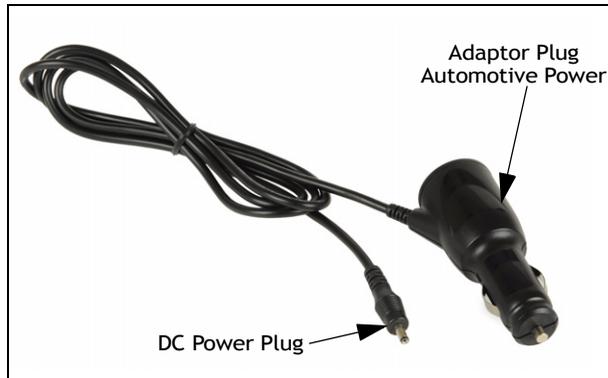
- Insert the DC power plug into the DC IN port at the base of the Ikôn.
- Insert the automotive power adaptor plug into automotive power outlet in your vehicle.

7.9 The Non-Powered Vehicle Cradle – Model No. CH1000

The CH1000 vehicle cradle is a passive device, designed to securely grip the Ikôn. The cradle design permits access for the DC input cable to connect to the Ikôn (see Figure 7.9 on page 265).

- A stylus holder.
- A loop for tethering the stylus.
- A cable tidy for draping the power cables or storing the disconnected DC plug.

Note: Shock and vibration specifications for the Ikôn are verified using Psion Teklogix-approved RAM mounts and mounting hardware. Use of non-certified Psion Teklogix mounting hardware is not recommended, and may void warranty coverage.

Figure 7.9 CH1000 Vehicle Cradle
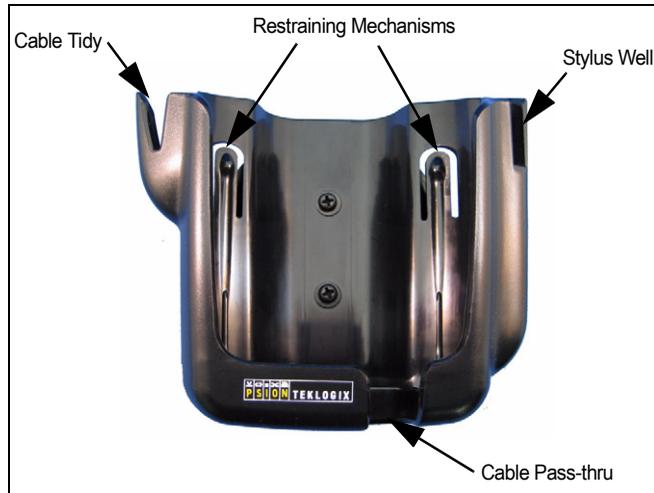
7.9.1   Important Instructions

The CH1000 storage temperature is -40°C to +70°C (-40°F to 158°F). Operating humidity and temperature is 5 - 95% non-condensing and -30°C to 60°C (-22°F to 140°F).

7.9.2   Vehicle Cradle Operation

7.9.2.1   Operator Controls

The vehicle cradle has no operator controls or power switch.

7.9.2.2   Indicators

The CH1000 has no front indicators. The Ikôn LED serves as the power indicator.

7.9.2.3   Placing The Ikôn In The Vehicle Cradle

Connect the vehicle power to the Ikôn prior to inserting it in the vehicle cradle.

The vehicle cradle is designed with a front opening through which you can pass the connected cable while inserting the Ikôn (see Figure 7.9 on page 265).

When placing the Ikôn into the vehicle cradle, press firmly on the top of the PDA and the Ikôn will bottom out on the cradle base. This action will make the final fit to the cradle base to allow the rear restraining mechanism to resist vibration.

7.9.2.4 Removing The Ikôn From The Vehicle Cradle

When removing the Ikôn, apply slight pressure to the rear and pull upwards. The rear-first motion will assist in disengaging the rear restraining mechanism.

7.9.3   Vehicle Cradle Mounting Recommendations

⚠️ *Warning: **Before mounting a vehicle cradle in a vehicle, there are a number of opera-
tor safety issues that require careful attention. An improperly mounted
cradle may result in one or more of the following: operator injury, operator
visibility obstruction, operator distraction and/or poor ease of egress for the
operator. Psion Teklogix strongly recommends that you seek professional
mounting advice from the vehicle manufacturer.***

*   ***Cable routing within a vehicle cab also requires careful consideration, espe-
cially for separately tethered scanners and other devices with loose cables. If
you are unable to obtain suitable advice, contact Psion Teklogix for assist-
ance (see Appendix A: "Summit Client Utility (SCU)". Note also that for
better protection, the equipment should be mounted inside the vehicle roll
cage.***

Pedestal mounts are recommended for all fixed mount locations because they offer optimal operator access. In addition, for safety reasons, only pedestal mounts with fully locking joints should be used in vehicles. Always adjust the pedestal for the optimum viewing angle, and securely tighten the hex and wing screws.

⚠️ *Important: **Ikôn vehicle cradles are designed to be compatible with any RAM®-B
mounting interface. For other mounting options please contact our Techni-
cal Support offices.***

The most effective way to mount the vehicle cradle RAM mount is to use the seven #M4 threaded inserts on the rear of the unit. Bolts must not extend more than 5mm into the vehicle cradle. You may also remove the rear Ram-B mount accessory to custom mount the vehicle cradle to a surface other than the recommended RAM-B (Figure 7.10 on page 267).

7.9.3.1 Mounting Template

The vehicle cradle is shipped with detailed mounting instructions including a drill template. Refer to the *CH1000 Ikôn Rugged PDA Vehicle Cradle Quick Start Guide (PN 8000163)*.

In every case, please take the following precautions:

1.   When installing the cradle, ensure the driver's view is not obstructed.

2. Install cradles so as not to obstruct vehicle safety features, i.e. air bags, seat belts, etc.

3. Ensure cradle is secured to the vehicle in a safe location. Injury may result otherwise.

4. Ensure the mounting has the capacity to hold the cradle and the Ikôn. Cradle plus Ikôn weight is approximately 1kg (2.2 lb.).

5. Psion Teklogix has recommended and approved mounts. Consult Psion Teklogix Customer Service for direction.

Figure 7.10 Removing The RAM Mount

To accommodate the service loop of the power cable, leave a 10.2 cm (4 in.) clearance at the bottom of the vehicle cradle. Leave a 17.8 cm (7 in.) clearance at the top of the vehicle cradle to allow easy removal of the Ikôn. When selecting a mounting location, refer to the detailed assembly instructions that are packaged with the pedestal.

> ⚠️ *Important:* *Before Psion Teklogix releases a product, our engineering team exposes that product to vibration tests to ensure the Ikôn will remain secure during normal use. But as a low cost mount, the cradle will not defend against shock if the vehicle undergoes a front or rear impact. Take care to mount the cradle in an upright position in case of accidents.*

If you choose to use a third party company-produced cradle, Psion Teklogix cannot take responsibility for the effects of that third party product when it causes failure to our device.

7.9.4   Cleaning The CH1000 Vehicle Cradle

⚠️   *Important: Dampen a soft cloth with mild detergent to wipe the unit clean.*

*   Use only mild detergent or soapy water on a slightly damp cloth to clean the CH1000. Avoid abrasive cleaners, solvents or strong chemicals for cleaning. The plastic case is susceptible to harsh chemicals. The plastic is partially soluble in oils, mineral spirits and gasoline. The plastic slowly decomposes in strong alkaline solutions.
*   To clean ink marks from the label, use isopropyl alcohol.

7.10   The Powered Vehicle Cradle - Model No. CH1005A

The CH1005A Powered Vehicle Cradle (12-24 VDC) is designed to securely grip the Ikôn when locked in and provides an easy single-handed release mechanism when the Ikôn needs to be quickly removed from the cradle. The cradle design permits access for the DC input cable to connect to the Ikôn (see Figure 7.14 on page 274). The cradle is also equipped with:

*   One USB A connector.
*   LED charge indicator.
*   A stylus holder and tether latch.
*   Built in speaker, identical to the one on Ikôn, that offers hands-free functionality. The powered cradle detects when the Ikôn is docked and can automatically transfer the speaker function from the Ikôn to the cradle.
*   Depending on the cradle variant, there can be up to two full RS-232 connectors.
    -   PN 1081148-500: no RS-232 connectors.
    -   PN 1081148-400: one RS-232 connector.
    -   PN 1081148-200: two RS-232 connectors.

The cradle comes with four mounting screws and a *CH1005A Powered Cradle Quick Start Guide* (PN 8000164), with illustrated electrical and mounting instructions.

Before Psion Teklogix releases a product, our engineering team exposes that product through a series of severe testing to ensure that it will survive in the rugged environments in which our products are typically used. These tests usually include shock and vibration testing as well as IP testing for water and dust, electrical shock, etc.

If a third party vehicle mount is used, the third party should perform the same type of testing in order to ensure that the design will maintain the factory specifications of the product. If the third party company is unwilling to perform the necessary testing and take responsibility

for the effects of the design, then we highly recommend using Psion Teklogix designed and supported accessories.

If you elect to use a third party company produced cradle, Psion Teklogix cannot take responsibility for the effects of that third party product if it causes failure of our device.

⚠️ *Important:* *Before using a vehicle cradle, read all instructions and markings on the housing.*

Do not operate a vehicle cradle if damaged by a sharp blow, dropped, or otherwise damaged in any way; qualified service personnel should inspect for internal damage.

Shock and vibration specifications for the Ikôn are verified using Psion Teklogix-approved RAM® mounts and mounting hardware. Use of non-certified Psion Teklogix mounting hardware is not recommended, and may void warranty coverage.

Do not expose to rain or snow! However, the Powered Vehicle Cradle is designed to accept a wet Ikôn handheld without harmful effect.

This Powered Vehicle Cradle cannot be used with non- Ikôn cradle accessories.

Figure 7.11 CH1005A Front View

7.10.1 CH1005A Vehicle Cradle Mounting Recommendations

⚠️ *Important: Before mounting a vehicle cradle in a vehicle, there are a number of opera-tor safety issues that require careful attention. An improperly mounted vehicle cradle may result in one or more of the following: operator injury, operator visibility obstruction, operator distraction and/or poor ease of egress for the operator. Psion Teklogix strongly recommends that you seek professional mounting advice from the vehicle manufacturer.*

Cable routing within a vehicle cab also requires careful consideration, especially for separately tethered scanners and other devices with loose cables. If you are unable to obtain suitable advice, contact Psion Teklogix for assistance.

In addition, for safety reasons, only pedestal mounts with fully locking joints should be used in vehicles. Always adjust the pedestal for the optimum viewing angle, and securely tighten the hex and wing screws.

The Ikôn Powered Vehicle Cradle is designed to be compatible with any RAM-B mounting interface.

The most effective way to mount the vehicle cradle RAM mount is to use the four #M4X12 threaded inserts on the rear of the unit (see Figure 7.12). Bolts are supplied with the cradle and must not extend more than 7 mm into the vehicle cradle.

Figure 7.12 CH1005A Rear View
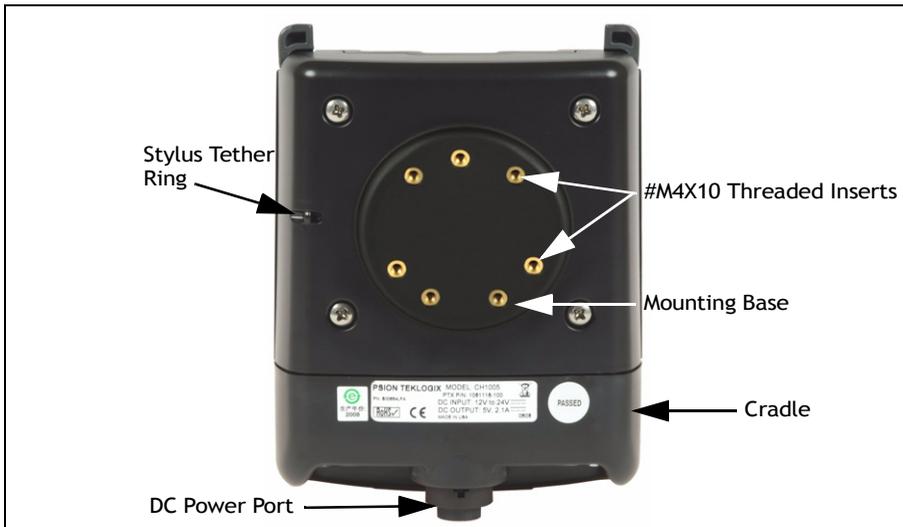
If you wish to custom mount the vehicle cradle to a surface other than the recommended RAM-B, please take the following precautions:

- When installing the cradle, ensure the driver's view is not obstructed.
- Install cradles so as not to obstruct vehicle safety features, i.e. air bags, seat belts, etc.
- Ensure cradle is secured to the vehicle in a safe location. Injury may result otherwise.
- Ensure the mounting has capacity to hold the cradle and Ikôn. Cradle plus Ikôn weight is approximately 1.3 kg.
- Psion Teklogix has recommended and approved mounts—consult Customer Service for instructions.

To accommodate the service loop of the connecting cable, leave a 10 cm clearance at the bottom of the vehicle cradle. Leave a 17 cm clearance at the top of the vehicle cradle to allow easy removal of the Ikôn. Refer to the detailed assembly instructions that are packaged with the pedestal when selecting a mounting location.

7.10.1.1 Mounting Template

For detailed mounting instructions including a drill template, refer to the *CH1005A Ikôn Rugged PDA Vehicle Cradle Quick Reference Guide (PN 8000165)*.

7.10.2 Cable Arrangement

Before installing cables between the cradle and other devices, review the following:

- Ensure that drilling holes will not damage the vehicle or its wiring.
- Protect cable runs from pinching, overheating and physical damage.
- Use grommets to protect cables that pass through metal.
- Use plastic straps and tie-downs to secure cables and connectors in their desired location, away from areas where they may get snagged or pulled.
- Keep cables away from heat sources, grease, battery acid and other potential hazards.
- Keep cables away from control pedals and other moving parts that may damage the cables or interfere with the operation of the vehicle.

7.10.3 Electrical Requirements

The Powered Vehicle Cradle is designed to allow the Ikôn to be powered by a vehicle battery. The battery installed in the Ikôn is also recharged by the vehicle battery system.

⚠️ *Warning:* ***Applying a voltage above 36VDC or reversing polarity may result in perma-
nent damage to the vehicle cradle power section and will void the product
warranty. For safety reasons, disconnect the vehicle cradle power cable
when the vehicle battery is being charged by an source other than the
vehicle alternator.***

7.10.3.1 Wiring Vehicle Power To The Cradle

The Powered Vehicle Cradle uses the automotive power outlet or the vehicle fuse box to
power from the vehicle battery system. The CLA power cable (PN 1081141) is used for the
automotive power outlet; the Power Extension cable (PN 1081146) is used for the vehicle
fuse box.

Figure 7.13 CLA Power Cable And Power Extension Cable

⚠️ *Warning:* ***A properly trained technician must perform the power connection using
Power Extension cable (PN 1081146) and the CH1005A. Improper connec-
tion can damage the vehicle or the cradle.***

***This cable can be used to provide power to CH1005A from a fused circuit.
The vehicle cradle should be added to a fused circuit with a new maximum
load capacity of the original load plus the cradle load, which is 4A.***

Power cables are equipped with fuses and instructions are supplied with each cable. Use
only a 4A slow blow Safety-approved fuse in the fuse assembly.

These cables should only supply operating power from the vehicle to the Powered Vehicle
Cradle from 12VDC or 24VDC systems.

- The Powered Vehicle Cradle draws no more than 1.9 A @ 12 VDC or 0.95 A @ 24 VDC. Any additional wiring, connectors or disconnects used should be rated for at least 4A. The Powered Vehicle Cradle and peripherals can be used with both negative ground systems when using the Power Extension cable. Peripheral wiring should be closely examined to avoid ground loops in positive ground systems.

- There is the option of connecting power to the cradle before or after the 'key' switch.

  - It is preferable to wire *after* the key switch. In this configuration, when the key is turned ON, the vehicle will power the cradle and docked Ikôn, charging the internal battery when needed. When the vehicle ignition is OFF, the Ikôn docked in the cradle will run on its internal battery.

  - However, if the operator switches the key off repeatedly for long periods during a shift, it may make more sense to wire the vehicle cradle before the switch. In this case, the Ikôn will always operate from vehicle power and that power will charge the battery when needed.

  - Keep in mind that the Ikôn will continue to operate with or without vehicle power as long as the internal battery has sufficient charge.

7.10.4 USB And Serial Connections

⚠️ *Important: Depending on the configuration, the CH1005A Powered Vehicle Cradle has up to three data connectors and one power connector.*

The Powered Vehicle Cradle full configuration consists of two serial DE-9M ports and one USB Type A port located at the base of the product. These are COM and USB ports that allow the communication of serial and USB devices with the Ikôn. These ports are:

- One powered USB A (Host).
- One full Serial port.
- One Serial port that provides power over pin 9. This port is located nearest the front LED and is marked as COM 6 in Figure 7.14.

Figure 7.14 CH1005A Ports

Peripherals such as scanners, printers, GPS, etc., may be used with the Ikôn and the cradle. Check with Psion Teklogix if there is any compatibility issue with the device you want to use with the Ikôn and the cradle.

7.10.5 Using The Vehicle Cradle

If your Ikôn is equipped with a shoulder strap or protective cover, these accessories need to be removed before installing the unit in a vehicle cradle. There is no need to remove hand straps or tethered devices from the unit.

- Slide the Ikôn into the cradle, and press firmly downward to the point where resistance is met. Press the Ikôn down through the resistance until it bottoms in the cradle—the locks on the latches will engage. This can be one smooth motion if you wish. Electrical contact will not be made until the Ikôn is fully inserted. On a vehicle, it's a good idea to pull up on the Ikôn to be certain that it is secure.

- To remove the unit, push the latches upwards—the Ikôn will be released so that it can be removed.

7.10.6 Maintaining The Vehicle Cradle

- Do not immerse the unit in water. Dampen a soft cloth with mild detergent to wipe the unit clean.

- Use only mild detergent or soapy water on a slightly damp cloth to clean the vehicle cradle.

- Avoid abrasive cleaners, solvents, or strong chemicals for cleaning.

- The vehicle cradle has a plastic case and stamped logo that is susceptible to harsh chemicals. The plastic and stamping is partially soluble in oils, mineral spirits and gasoline. They slowly decompose in strong alkaline solutions.

- To clean ink marks from the label, use isopropyl alcohol.
- The two-lock assembly in the Powered Vehicle Cradle holds the Ikôn firmly in place. Although this mechanism is designed for at least 20,000 cycles, it will wear over time and will no longer lock the Ikôn securely in the cradle. For replacement parts and instructions contact Psion Teklogix. Partial disassembly is required.

7.11 Scanners And Imagers

The Ikôn supports several scanner/imager options to address a variety of user application requirements. The scanner/imager installed in your unit can be configured using the *Scanner Settings* located under *Settings>System>Teklogix Scanners* (see "Scanner Settings" on page 176) and the Manage Triggers application (see "Manage Triggers" on page 159).

Scanner/imagers available for your Ikôn include: 1D Laser SE955, 1D Imager EV15, and the 2D Imager SX5400.

It is critical that you review the safety information in the *"Ikôn Rugged PDA Regulatory & Warranty Guide"*, PN 8000148 before proceeding.

7.11.1 Scanning Techniques

- Hold the scanner at an angle. Do not hold it perpendicular to the bar code.
- Do not hold the scanner directly over the bar code. In this position, light can reflect back into the scanner's exit window and prevent a successful decode.
- Scan the entire bar code. If you are using a 1D laser scanner, make certain that the scan beam crosses every bar and space on the bar code, including the margins on either end of the symbol.
- If you are using a 2D imaging scanner, make certain the red, oval shaped framing mark is centred within the bar code you want to scan.
- When using imaging scanners, do not move the scanner while decoding the bar code. Movement blurs the image.
- Hold the scanner farther away for larger bar codes.
- Hold the scanner closer for bar codes with bars that are close together.

A bar code icon appears on the screen during a scan. While the scanner beam is active, the onscreen message states: SCANNING. To disable the onscreen message:

- Tap on **Start>Settings>System tab**.
- Tap on the **Teklogix Scanners icon** followed by the **Options tab**.
- Under the *Display* menu, disable **Scan Indicator**.

When the scan is successful, the bar code data is displayed on the screen until the scan button is released providing that *Scan Result* is set to *on*. If this option is not enabled:

- Tap on **Start>Settings>System tab**.
- Tap on the **Teklogix Scanners icon** followed by the **Options tab**.
- In the *Display* menu, set **Scan Result** to **ON**.

7.11.2 Troubleshooting

If the scanner is not working, investigate the following:

- Is the unit on?
- Check that the bar code symbology being scanned is enabled for the Ikôn you are using. Check any other parameters that affect the scanning procedure or the bar code.
- Check the bar code to make sure it is not damaged. Try scanning a different bar code to verify that the problem is not with the bar code.
- Check that the bar code is within the proper range.
- Does the Ikôn display the warning without scanning? This suggests a hardware problem in the Ikôn.
- Is the laser beam scanning across the bar code?
- Once the scan beam has stopped, check the scanner window for dirt or fogging.

7.11.3 Operating One Dimensional (1D) Laser Scanners

- Turn the Ikôn on. Wait until the unit has booted up completely.

⚠ *Important: If an aiming dot is available on the installed scanner, the dot will be enabled for a configurable time period (including off), after which normal scanning begins. Refer to "Dot Time (msec)" on page D-2 for details.*

Double-clicking the trigger will override the aiming delay and initiate an immediate scan. Note that the aiming dot is standard on long-range and high visibility internal scanners.

- Aim at the bar code and press the scan key or the trigger. A scan beam and a warning indicator appear until a successful decode is achieved or six seconds have elapsed.

7.11.4 Operating Two Dimensional (2D) Imagers

An imager takes a snap shot of a single bar code or multiple bar codes (at one time). It can find a bar code regardless of its orientation—that is, even a bar code printed at a 45 degree angle to the Ikôn will be decoded successfully.

Note: When scanning multiple bar codes, ensure that all of the desired bar codes are within the field of view of the scanner. It is possible that even when all bar codes are within the field of view, not all of them will be decoded. Only successfully decoded bar codes are passed to the application program. The application program then issues a warning, asking that you scan the missing bar codes.

When scanning a single bar code, ensure that only the desired bar code is within the field of view of the scanner.

Because imagers generally have a shorter depth of field than laser scanners, some practise may be required to find the optimal distance from the types of bar codes being scanned. Although the imager includes illumination LEDs, ambient light will help the imager decode the bar codes, especially if the bar code is far from the Ikôn.

*Important: **Keep in mind that the imager scanner is a camera, and the LED illumination is a flash. Glare can be an issue on reflective media such as plastic coated bar codes, just as glare is an issue for photographers. When pointing at a shiny surface, either shift the bar code to the side or top, or angle the bar code so that the glare reflects away from the imager scanner.***

Most imagers take several 'snap shots' of the bar code in order to decode it. It is normal for the LEDs to flash two or three times. Hold the unit steady between flashes to improve decode performance.

• Switch the Ikôn on. Wait until the unit has booted up completely.

• Aim at the bar code and press the scan key or the trigger. Hold the trigger until a successful or failed scan result is obtained.

• When the scan button or trigger is pressed, a red, oval shaped light (the framing marker) is displayed. Centre the framing marker in the field—either in the centre of the bar code you want to scan or in the centre of the area in which multiple bar codes are to be scanned.

The illumination LEDs will flash (typically several times) and a picture of the bar code(s) is taken.

7.12 *Bluetooth* Peripherals

The Ikôn is equipped with a *Bluetooth* radio, making it possible to communicate with a variety of *Bluetooth* peripherals, including GSM/GPRS handsets, scanners, printers and so on.

Psion Teklogix provides built-in support for the *Bluetooth* peripherals listed below.

• GSM/GPRS universal handset
• *Bluetooth* printer
• *Bluetooth* headset

Keep in mind that *Bluetooth* and IEEE 802.11b/g radios both operate in the 2.4GHz band. Although the Ikôn includes features to minimize interference, performance of the system will not be optimal if you use both radios simultaneously. Typically, when both radios operate in the Ikôn at the same time, they cannot transmit simultaneously–this has a negative impact on overall system throughput. To minimize the impact on the backbone 802.11g network, Psion Teklogix recommends using *Bluetooth* peripherals that have low transaction rates (such as printers and scanners).

Refer to "Bluetooth Setup" on page 198 for information about setting up your *Bluetooth* devices for communication. In addition, review the manual shipped with your *Bluetooth* device to determine the method used to pair with the Ikôn host.

7.13 Digital Camera

The Ikôn can be equipped with an optional digital camera that can take still pictures or short video clips. Refer to "Pictures & Videos" on page 101 for details about using the camera.

The *Pictures & Videos* applet allows the operator to activate the camera for still shots or video clips. It also provides a number of tools to crop photos, adjust picture contrast and brightness, zoom in and out of photos, and save your adjustments.

⚠ *Important: The "Pictures & Videos" program can only display .bmp or .jpg formats. Photos in other formats will need to be converted on your PC before they can be transferred to the Ikôn PDA.*

SPECIFICATIONS 8

8.1   Ikôn Specifications – Model No. 7505

Note: Performance specifications are nominal and subject to change without notice.

8.1.1   Hardware

Physical Dimensions

- 16 cm x 8.1 cm x 4.5 cm (6.3 in. x 3.2 in. x 1.8 in.)

Weight (with battery pack)

- 450 g (1.0 lbs.)

User Interface

Color Touchscreen Display:	9.39 cm (3.7 in.) diagonal
	Full VGA 480x640 resolution
	Transflective, portrait mode TFT
	Adjustable Backlight
	Sunlight readable (for outdoor use)
	High reliability LED backlight
	Easily replaceable and customizable bezel
	Passive stylus or finger operation
	Signature capture
Keyboards:	Alphanumeric
	Numeric
	Ergonomically enhanced for ambidextrous, one-hand operation
	Backlit, high durability hard-capped keys
Indicators And Controls:	3 LEDs indicate battery charge, application, and radio on/off status
Audio:	Hands-free speaker, total output volume: 95dB SPL
	Microphone/Receiver

Wireless headset via *Bluetooth* capability

Audio jack (mono)

Expansion Slots

- One Micro-SD memory card slot – user accessible.
- 60-PIN expansion interface: GSM/GPRS EDGE, and other third-party expansion modules developed using Psion Teklogix Ikôn Hardware Developer's Kit.
- Flex cable interface with robust connector: supports scanner (serial) and imager (USB) modules.

External Connectors

- One Tether connection with full RS-232 and USB On-the-Go (OTG) functionality.
- One Low-Insertion Force (LIF) docking connector.
- DC Power Jack.

Power Management

- Battery Pack: Lithium-Ion 5000 mAh capacity
- Advanced Smart Battery with gas gauge.
- 3 power source options: Runs off battery, AC power, or automotive power supplies.
- Backup power >10 minutes.

Environmental Specifications

Drop Test:	Withstands 6 drops at 1.5 meters (5 ft.) on all surfaces.
Rain/Dust:	IP65, IEC 60529.
Operating Temperature:	-10°C to +50°C (14°F to 122°F)
Relative Humidity:	5% to 95% RH non-condensing
Storage Temperature:	-20°C to +60°C (-4°F to 140°F)
Shock and Vibration:	5 to 400 Hz PSD (random) and 30 g (3 axis)
ESD:	+/- 8kVdc air discharge, +/- 4kVdc contacts

8.1.2 Software

Platform

- XScale PXA270 @ 624 MHz, 32 bit RISC CPU

• 256 MB Flash ROM, 128 MB RAM

Operating System

• Microsoft® Windows® Mobile® 6 Classic
• Microsoft® Windows® Mobile® 6 Professional

Programming Environment

• Psion Teklogix Mobile Devices SDK
• Hardware Development Kit (HDK)
• .NET and C++ programming using Microsoft® Visual Studio® 2005
• Java programming supporting JDK 1.2.2 or higher
• Standard Protocol APIs
    - Windows sockets (CE .net)

Application Software

• Internet Explorer® Mobile included with Windows® Mobile® 6
• Windows Mobile Device Center
• Voice dialer and Personal Information Manager (PIM) included with Windows Mobile 6.1 Professional
• PTX Connect VoIP
• Optional Open TekTerm terminal emulation software, supports IBM 5250,IBM 3270, HP2392, ANSI and TESS
• Mobile Control Center (MCC) device management

8.1.3   Wireless Communication

*Note: 802.11b/g, GSM and **Bluetooth** are available simultaneously.*

Optional expansion modules for:

• 802.11b/g (proprietary module) operating in the 2.4GHz band:
    - Supports IEEE 802.11b data rates of 1,2,5.5 and 11Mbps using Direct Sequence Spread Spectrum (DSSS).
    - Supports IEEE 802.11g data rates of 6,9,12,24,36,48 and 54Mbps,using Orthagonal Frequency Division Multiplexing (OFDM) base band modulation
• GSM/GPRS EDGE (via expansion interface)

- Quad-Band – 850/900/1800/1900 MHz
- Voice and Data
- GPRS Class B, Multi-Slot Class 12
- EGPRS Class B, Multi-Slot Class 12
- UMTS
  - UMTS/HSDPA: Triple band, 850/1900/2100 MHz
  - GSM/GPRS/EDGE: Quad band, 850/900/1800/1900 MHz
  - Audio: 1 analog interface
  - USB supports a USB 2.0 Full Speed 12 Mbit/s device interface
- *Bluetooth* class 2, version 2.0
  - Support Enhanced Data Rate (EDR) for up to 3Mbps data rate
  - Support Advanced Frequency Hopping (AFH) for reduced interference with 802.11b/g radio

8.1.4 Bar Code Applications (optional)

Note: All are user upgradeable.

- Optional 1D EV15 imager
- Optional 2D SX5400 imager
- Optional 1D SE955 laser scanner

8.1.5 Digital Camera (optional)

- Colour 2 Megapixel (UXGA) fixed focus with flash
- Technology: CMOS
- Max Picture Resolution: 1600x1200
- Focal Length: 3.52mm
- Focus Range: 50cm to infinity
- Functions: Auto exposure, white balance, black reference, color saturation
- Flash: Integrated LED flash

8.1.6   Accessories

For details about accessories available with the Ikôn, refer to Chapter 7: "Peripheral Devices & Accessories".

- **Carrying accessories:**
    - Hand strap with or without tether and stylus.
    - Carrying case, either functional or non-functional
    - Soft shell holster
- **Communications:**
    - Quad dock (4-site) with 10/100 BaseT Ethernet and charge functions.
    - Desktop dock with Type A and Type B USB connectivity and charge functions for an internal battery along with a spare battery.
- **Power supplies:**
    - AC wall adaptor
    - Automotive power adaptor
- **Vehicle peripherals:**
    - Powered and Non-powered cradle
    - RAM Mount with screws

8.1.7   Approvals

Safety:	CSA/UL60950-1, IEC 60950-1, EN60950-1
EMC:	FCC Part 15 Class B
	EN 55022
	EN 55024
	EN 301 489
Laser:	IEC 60825-1, Class 2
	FDA 21 CFR 1040.10
	1040.11 Class II
Bluetooth:	Version 2.0
RF:	*Bluetooth* and 802.11b/g: EN300 328, Part 15.247
GSM/GPRS:	EN301 511; EN50360/361, NAPRD03;

	3GPP51.010; FCC Parts 22 & 24; Industry Canada; RSS-132 & 133
In-Vehicle Cradle:	e Mark

8.2   Radio Specifications

8.2.1   802.11 b/g WLAN Radio

Form Factor	Proprietary module based on 16 bit CF interface
Antenna port	Two Hirose U.FL connectors for both transmit and receive antenna diversity
Antenna	Two PCB slot antennas 2.1 dBi
Transmit Power	802.11b: 70mW (+18.5 dBm)
	802.11g: 30mW (+15 dBm)
Frequency Range	2.400 - 2.4897 GHz
Channels	FCC: 11
	ETSI: 13
	TELEC: 13
RX Sensitivity	-96dBm @ 1 Mbps, -90 dBm @ 11 Mbps, -94 dBm @ 6 Mbps, -75 dBm @ 54 Mbps
Data Rates	802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps
	802.11b: 1, 2, 5.5, 11 Mbps

8.2.2   Siemens MC75 GSM/GPRS/EDGE Radio

Quad-Band GSM 850/900/1800/1900 MHz

EDGE (E-GPRS) multi-slot class 12

GPRS multi-slot class 12

GSM release 99

Output power:	- Class 4 (2 W) for EGSM850
	- Class 4 (2 W) for EGSM900
	- Class 1 (1 W) for GSM1800

         - Class 1 (1 W) for GSM1900

Control via AT commands

(Hayes 3GPP TS 27.007 and 27.005)

Internet Services:	TCP, UDP, HTTP, FTP, SMTP, POP3
Supply voltage range:	3.2 to 4.3 V

Specifications for:

EDGE data transmission:	EDGE class 12: max 236.8 kbps (downlink)
	Mobile station class B
	Modulation and coding scheme MCS 1-9
GPRS data transmission:	GPRS class 12
	Mobile station class B
	PBCCH support
	Coding schemes CS 1-4
CSD data transmission:	Up to 14.4 kbps
	V.110
	Non-transparent mode
SMS:	Point-to-point MO and MT
	Text and PDU mode
Voice:	Triple-rate codec for HR, FR and EFR
	Adaptive multi-rate AMR
	Basic hands-free operation
	Echo cancellation
	Noise reduction
Interfaces:	Hirose U.FL-R-SMT 50 ohm antenna connector
	Antenna solder pad
	Molex 80-pin board-to-board connector
	- Power supply
	- Audio: 2x analog, 1x digital

- serial interface (ITU-T V.24 protocol)

- SIM card interface 3 V, 1.8 V

8.2.3   Siemens HC25 UMTS Modem

Frequency bands:	UMTS/HSDPA: Triple band, 850//1900/2100MHz GSM/GPRS/EDGE: Quad band, 850/900/1800/1900MHz
GSM class:	Small MS
Output power (as per Release 99):	Class 4 (+33dBm ±2dB) for EGSM850
	Class 4 (+33dBm ±2dB) for EGSM900
	Class 1 (+30dBm ±2dB) for GSM1800
	Class 1 (+30dBm ±2dB) for GSM1900
	Class E2 (+27dBm ± 3dB) for GSM 850 8-PS
	Class E2 (+27dBm ± 3dB) for GSM 900 8-PS
	Class E2 (+26dBm +3 /-4dB) for GSM 1800 8-PSK
	Class E2 (+26dBm +3 /-4dB) for GSM 1900 8-PSK
	Class 3 (+24dBm +1/-3dB) for UMTS 2100, WCDMA FDD BdI
	Class 3 (+24dBm +1/-3dB) for UMTS 1900, WCDMA FDD BdII
	Class 3 (+24dBm +1/-3dB) for UMTS 850, WCDMA FDD BdV
RoHS:	All hardware components fully compliant with EU RoHS Directive
HSDPA features:	3GPP Release 5, DL 3.6 Mbps, UL 384 kbps UE CAT. [1-6], 11, 12 supported
UMTS features:	3GPP Release 4, PS data rate – 384 kbps DL / 384 kbps UL
	CS data rate – 64 kbps DL / 64 kbps UL
GSM / GPRS / EGPRS features:	Data transfer GPRS

- Multislot Class 10

- Full PBCCH support

- Mobile Station Class B

- Coding Scheme 1 – 4

EGPRS

- Multislot Class 10

- EDGE E2 power class for 8 PSK

- Downlink coding schemes – CS 1-4, MCS 1-9

- Uplink coding schemes – CS 1-4, MCS 1-9

- Uplink coding schemes – CS 1-4, MCS 1-9

- BEP reporting

- SRB loopback and test mode B

- 8-bit, 11-bit RACH

- PBCCH support

- 1 phase / 2 phase access procedures

- Link adaptation and IR

- NACC, extended UL TBF
- Mobile Station Class B

CSD

- V.110, RLP, non-transparent

- 9.6 kbps

SMS:	Point-to-point MT and MO
	Text and PDU mode
Audio:	Audio speech codecs
	GSM: AMR, EFR, FR, HR
	3GPP: AMR
	DTMF supported
	CEPT and ANSI supervisory tones supported

Software: AT commands AT-Hayes GSM 07.05 and 07.07, Siemens

                                AT commands for RIL compatibility (NDIS/RIL)

                                Microsoft™ compatibility RIL / NDIS for Windows Mobile™

Interfaces: USB Supports a USB 2.0 Full Speed (12Mbit/s) device interface

                                Audio: 1 analog interface

                                UICC interface: Supported chip cards: SIM / UICC 3V, 1.8V

                                Antenna 50Ohms. External antenna can be connected via antenna connector or antenna pad (spring contact)

                                Module interface 50-pin board-to-board connector

8.2.4   *Bluetooth* Radio

Embedded (920 kbps serial interface)

Bluetooth Version	Version 2.0 compliant (features Adaptive Frequency Hopping for better co-existence with 802.11 radio and Enhanced Data Rate (EDR) for up to 3Mbps data rate)
Chip Antenna Gain	1dBi peak
Transmit Power	-3 dBm (0.5 mW) minimum, +4 dBm (2.5 mW) max
Frequency Range	2.400 - 2.4835 GHz
RX Sensitivity (BER£0.1%)	-80 dBm max
Data Rate	V1.2 = 732.2kbps and 57.6kbps asymmetric, 433.9kbps symmetric
	V2.0 = 2 & 3Mbps

8.3   Lithium-Ion 5000 mAh Battery Specifications

Description	Specification
Model Number	CH3000
Part Number	1081236 (North America) 1081506 (World)
Chemistry	Lithium-Ion (Li-Ion)
Capacity	5000 mAh nominal at 1000mA discharge 20 C to 3.0V (min)
Voltage	3.7V nominal (3.0V min. to 4.2V max.)
Cell Configuration	2P1S (2 parallel connected cells)
Maximum charge voltage	4.2V +/- 1%
Recommended charge termination timeout	5.0 hr - charging must stop
Charge temperature	0°C to +40°C (32°F to +104°F)
Discharge Temperature	-20°C to +50°C (-4°F to +122°F)
Storage Temperature	-20°C to +50°C (-4°F to +122 ºF)–storage at elevated temperatures not recommended 25°C (77 ºF)–recommended storage temperature.
Cycle Life	300 cycles minimum with no degradation below 80% of nominal capacity based on 1C charge / 1C discharge rates (to 3.0V) @ 25°C (77 ºF)

8.4   Scanner/Imager Specifications

8.4.1   SE 955HP Specifications

Parameter	SE 955HP
Scan Angle	47° ± 3° default / 35° ± 3° reduced
Scan Rate	104 (± 12) scans/sec (bi-directional)
Scan Pattern	Linear
Wavelength	650nm

Input Voltage	3.0-5.5 VDC ± 10%
Input Current	65 mA typical
Standby Current	8 µA max
Operating Temperature	-20° to 60° C -4° to 140° F
Print Contrast	Minimum 25% absolute dark/light reflectance measured at 650 nm
Dimensions	1.21 cm H x 2.16 cm W x 1.55 cm (max) 0.47 in. H x 0.85 in. W x 0.61 in. D (max)
Symbologies	UPC/EAN, Code 128, Code 39, Code 93, I 2 of 5, Discrete 2 of 5, Codabar, MSI Plessey

8.4.1.1 SE 955HP Decode Zone

Decode Zone Typical	
4 mil	1.0 in. - 5.5 in. / 2.54 cm - 13.97 cm
5 mil	1.25 in. - 8 in. / 3.18 cm - 20.32 cm
7.5 mil	1.5 in. - 13.25 in. / 3.81 cm - 33.66 cm
10 mil	1.5 in. - 17.5 in. / 3.81 cm - 44.45 cm
UPC 100%	1.5 in. - 23.5 in. / 3.81 cm - 59.69 cm
15 mil	1.5 in. - 29.5 in. / 3.81 cm - 74.93 cm
20 mil	1.75 in. - 35.5 in. / 4.45 cm - 90.17 cm
40 mil	* - 40 in. / * - 101.6 cm
55 mil	* - 55 in. / * - 139.7 cm
* dependent on width of bar code	

8.4.2 EV15 Imager Specifications

Parameter	EV15
Light Source	617nm Highly Visible LED

Scan Angle	40º
Minimum Print Contrast	Minimum 25%
Min x. Dimension	0.1 mm (4 mils)
Reading Distance	Up to 90cm (35 in)
Symbologies	UPC (E&A), EAN, RSS, Code 39, Code 128, UCC/EAN 128, ISBN, ISBT, Interleaved, Matrix, Industrial and Standard 2 of 5, Codabar, Code 93/93i, Code 11, MSI, Plessey, Telepen, PDF417, Micro PDF417
Ambient Light	Works in any lighting conditions, from 0 to 100,000 lux
Shock	2000G, 0.7ms, half sinus, 3 axes
Vibration	50G r.m.s

8.4.2.1 EV15 Imager Decode Zone

0 Lux to 100,000 Lux		
	Minimum range	Maximum range
Mil Size	Inches	Inches
5	2.5	7
10	3	14
UPC	2	14.5
20	2.5	22
40	3	35.5
High quality symbols in normal room light.		

8.4.3   SX5400* Imager

Specification	SX5400
Optical resolution	752H x 480V
Field of view at 160mm	120mm (H) x 78mm (V) 41.1° (H) x 27.4° (V)

Pitch angle	±45°
Skew angle	±45°
Ambient light	0 to 100,000 lux (full sunlight) 300 lux nominal
Minimum contrast	10%
Targeting	Intuitive range finding 626 nm LED
Self illumination	Red LED (standard)
Supply voltage	5 V ± 10%
Power supply	3.6 Volt DC nominal (2.7 - 5 Volts DC)
Connectivity	USB 1.1 or serial async
Connector to the interface board	Molex 52892-1295 or HiRose FH12-12S-.5SH
Symbologies supported	Code 39; Code 39 Full ASCII; UPC-A,-A2, -A5; UPC-E, -E2, -E5; EAN-8 -13; JAN;I2of5; Code 128; Codabar/NW7; RSS 14, RSS Limited, RSS Expanded, RSS 14 Truncated, PDF417, microPDF417; Composite, CC-A, CC-B, CC-C; image capture, Data Matrix; QR Code; Maxicode; Aztec Code; Planet; Postnet; Royal Mail 4SCC; 4 State postal codes from Australia, Canada, Japan; Korean Post 3of5.

*Formerly known as Symagery SX5400.

8.4.3.1 SX5400 Imager Performance

The table below presents the typical performance of the SX5400 Imager at 300 lux (@ 160mm focus when using Grade A photographic-quality bar codes). Listed are the average near, far, and Depth of Reading (DOR) numbers.

Symbology	Size (mil)	Near Avg. (inches)	Far Avg. (inches)	DOR Avg. (inches)
C39	7.5	4.0	7.0	3.0
C39	10	2.75	9.25	6.5
C39	15	2.25	11.0	8.75
PDF6.6	6.6	4.0	6.5	2.5

Symbology	Size (mil)	Near Avg. (inches)	Far Avg. (inches)	DOR Avg. (inches)
PDF10	10	3.25	9.0	5.75
PDF15	15	2.25	10.75	8.5
DM15	15	3.0	8.0	5.0
QR15	15	3.75	7.5	3.75
UPC	12.5	3.0	9.5	6.5

8.4.4 HHP 5000 Imager Performance

Specification	HHP 5000
Image Sensor	752H x 480 CMOS sensor
Motion Tolerance	4 in. (10.2 cm) per second
Rotational Sensitivity	360°
Viewing Angle	±40°
Ambient light	Total darkness to 100,000 lux (full sunlight)
Illumination LEDs	626 nm ±30 nm
Aiming	LEDs: 526 nm ±30 nm Laser: 650 nm ±10 nm
Symbologies supported	2D: PDF417, MicroPDF417, MaxiCode, Data Matrix, QR Code, Aztec, Aztec Mesa, Code 49, UCC Composite Linear: Code 39, Code 128, Codabar, UPC, EAN, Interleaved 2 of 5, RSS, Code 93, Codablock Postal: Postnet (US), Planet Code, BPO 4 State, Canadian Post, Japanese Post, KIX (Netherlands) Post
Size	1.78 cm Depth x 2.79 cm Width (without mounting tabs) x 1.21 cm Height 0.7 in. Depth x 1.1 in. Width (without mounting tabs) x 0.475 in. Height
Weight	5.9 grams (.21 ounces)
Operational Input Voltage	Imager: 3.3 VDC ±5% (23°C) Illumination + Aimer 5300: 3.0 VDC to 5.5 VDC (23°C)

Operating Temperature	-30° to +50°C (-34° to 122°F)
Storage Temperature	-40° to +70°C (-40° to 158°F)
Humidity	up to 95% RH, non-condensing at 122° F (50°C)
Shock	18 shocks of 3,500 G for 0.5 msec at 23°C (73° F)

8.4.4.1 HHP 5000 Decode Zone

Performance Focal Point

SR 7	inches (17.8 cm) from lens plate
SF4.5	inches (11.4 cm) from lens plate

SR Working Range	8.3 mil Linear (.02 cm)	10 mil PDF417 (.025 cm)	13 mil UPC (.033 cm)	15 mil Data Matrix (.038 cm)	15 mil QR (.038 cm)	35 mil Maxi-code (.089 cm)
Near	3.5 in. (8.9 cm)	3.1 in. (7.9 cm)	2.1 in. (5.3cm)	2.3 in. (5.8 cm)	2.1 in. (7.9 cm)	2.0 in. (5.1 cm)
Far	7.6 in. (19.3cm)	9 in. (22.9 cm)	13.2 in. (33.5 cm)	10.2 in. (25.9 cm)	8.8 in. (22.4 cm)	13.0 in. (33 cm)
SF Working Range	6.6 mil PDF417 (.017 cm)	7.5 mil Linear (.019 cm)	8.3 mil Data Matrix (.021 cm)	8.3 mil QR (.021 cm)	10 mil Linear (.025 cm)	13 mil UPC (.033 cm)
Near	2.8 in. (7.1cm)	2.5 in. (6.4cm)	3.4 in. (8.6cm)	3.4 in. (8.6cm)	2.2 in. (5.6cm)	2.0 in. (5.1cm)
Far	6 in. (15.2cm)	6.5 in. (16.5cm)	5.7 in. (14.5cm)	5.4 in. (13.7cm)	7.6 in. (19.3cm)	8.9 in. (22.6cm)

APPENDIX A

SUMMIT CLIENT UTILITY (SCU)

This appendix provides details about each tab in the *Summit Client Utility* (SCU). For quick setup instructions for the 802.11b/g Summit radio using the Summit Client Utility (SCU), refer to "Setting Up An 802.11b/g Radio–Summit Client Utility" on page 17.

A.1 SCU Tabs

This section provides a detailed description of each of the tabs available in the SCU – *Main*, *Profile*, *Status*, *Diags* and *Global*.

A.2 Main Tab

The *Main* tab is displayed when you tap on the *Start>Programs>SCU* icon.
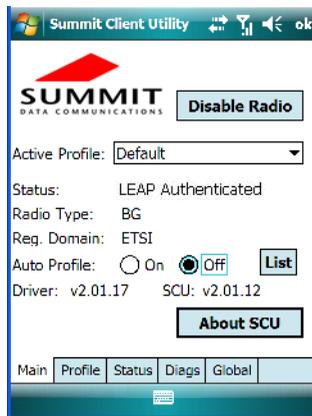
- **Enable/Disable Radio**: Enables or disables the radio. This is a toggle button; when the radio is enabled, this button reads *Disable Radio* and when the radio is disabled, the button reads *Enable Radio*.

- **Active Profile:** Lists the name(s) of the active configuration profile(s). When a *profile* is chosen from the *Active profile* dropdown menu, the settings for that profile become active.
  If *ThirdPartyConfig* is selected, after the Ikôn goes through a power cycle, WZC is used for configuration of the radio. See "ThirdPartyConfig" on page A-7 for details.

- **Radio Type**: Indicates the type of radio installed in the device, e.g. "BG" when an 802.11b/g radio is installed.

- **Reg. Domain**: Indicates the regulatory domain (e.g. ETSI, FCC or TELEC) for which the radio is configured. "Worldwide" means that the radio can be used in any domain.

- **Status:** Indicates if the radio is associated to an access point. If this is not the case, Association Status indicates the radio status.

- **Auto Profile:** When this option is set to *On*, SCU automatically switches between configured network profiles depending on their availability. To specify which networks will be scanned, tap on the *List* button, and add a checkmark next to the profiles you want SCU to consider when switching between networks; only the selected networks will be scanned for *Auto Profile* selection.

- **Driver** and **SCU**: These fields display the version of the device driver and the SCU that are running on the Ikôn.

- **About SCU**: This box provides details about the SCU software.

A.3 Profile Tab

The *Profile* tab allows you to define radio and security settings that are stored in the registry as part of the configuration profile.

The profile you create and save is listed in the *Active Profile* dropdown menu in the *Main* tab. You can define up to 20 *profiles*.
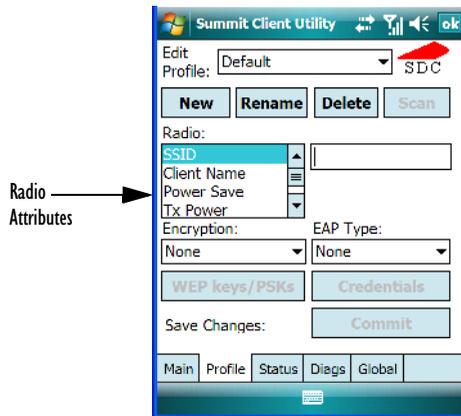
- **Edit Profile:** Used to choose the profile to be viewed or edited. If *ThirdPartyConfig* is chosen, after the Ikôn goes through a power cycle, WZC is used for configuration of the radio.

- **New:** Allows you to create a new profile with default settings and assign it a name.

- **Rename:** Allows you to assign a profile name.

- **Delete:** Deletes the profile unless it is currently active.

- **Scan**: Opens a new window which displays a list of available access points with their respective SSIDs, Signal Strength (RSSI value) and Security Status. Selecting an AP returns you to the profile page and populates a new profile with the information available from the scan to simplify setting up a new profile.

- **Radio:** Lists radio attributes. These attributes can be individually chosen from this menu. When an attribute is chosen, an associated list of options is displayed where you can assign new settings or view existing settings.

- **Commit:** Saves all changes.

The following table describes the options in the *Radio Attributes* dropdown menu:

Radio Attribute	Description	Value	Default
SSID	Service set identifier (SSID) for WLAN to which the radio connects.	Maximum of 32 characters.	None
Client Name	Name assigned to radio & Ikôn into which it is installed.	Maximum of 16 characters.	None
Power Save	Power save mode for radio.	CAM: Constantly awake. Maximum: Maximum power savings. Fast: Fast power save mode.	Fast
Tx Power	Maximum transmit power.	Max: Maximum defined for current regulatory domain. Measured in mW: 50,30,10, 1.	Max
Bit Rate	Used by radio when interacting with WLAN access point.	Auto: Rate automatically negotiated with access point. Rates in Mbps: 1, 2, 5.5, 6.9 11, 12, 18, 24, 36, 48, 54.	Auto
Radio Mode	Used by 802.11g when interacting with access point.	B rates only: 1, 2, 5.5, & 11 Mbps. G rates only: 6, 9, 12, 18, 24, 36, 48, and 54 Mbps. BG rates full: All B and G rates. BG rates optimized: 1, 2, 5.5, 6, 11, 24, 36 & 54 Mbps.	BG rates optimized
Auth Type	802.11 authentication type used when associating with access point.	Open, shared-key, or LEAP (Network-EAP).	Open
EAP Type	Extensible Authentication Protocol type used for 802.1X authentication to access point.	None, LEAP, EAP-FAST, PEAP-MSCHAP – To use EAP-TLS, you must use WZC.	None

Radio Attribute	Description	Value	Default
Credentials	Authentication credentials for the selected EAP type. Refer to "EAP Credentials" on page A-6.	User: Username or Domain/User-name (up to 64 characters). Password: up to 64 characters. For PEAP: CA Cert–CA server certificate filename.	None
Encryption	Type of encryption used to protect transmitted data.	None, Manual WEP, Auto WEP (generated during EAP authentication), WPA PSK, WPA TKIP, WPA2 PSK, WPA2 TKIP, WPA2 AES, CCKM TKIP. For Manual WEP: Up to four static WEP keys. For PSK: ASCII passphrase or hex PSK.	None

- **EAP-Type & Encryption:** Security settings. These settings allow you to enhance the security of data across the wireless LAN. Refer to "EAP Credentials" on page A-6 and "SCU Security Capabilities" on page A-5 for details about these settings.

A.3.1 SCU Security Capabilities

The SCU provides integrated security to protect transmitted data as well as the PDA and wireless WAN infrastructure that transmit and receive data.

A foundational element of the IEEE 802.11i WLAN security standard is IEEE 802.1X and a critical application on a mobile device is an 802.1X supplicant. This supplicant provides an interface between the radio and the operating system and supports the authentication and encryption elements required for 802.11i, also known as Wi-Fi Protected Access 2 (WPA2), as well as predecessors such as WPA and WEP. Summit software includes an integrated supplicant that supports a broad range of security capabilities, including:

- 802.1X authentication using pre-shared keys or an EAP type, required for WPA2 and WPA.

- Data encryption and decryption using WPA2 AES, WPA TKIP or WEP.

Common EAP types include:

- **EAP-TLS:** Uses the same technology as a follow-on to Secure Socket Layer (SSL). It provides strong security, but relies on client certificates for user authentication.

- **PEAP:** Provides secure user authentication by using a TLS tunnel to encrypt EAP traffic. Two different inner methods are used with PEAP:
- EAP-MSCHAPV2, resulting in PEAP-MSCHAP: This is appropriate for use against Windows Active Directory and domains.
- EAP-GTC, resulting in PEAP-GTC: This is for authentication with one-time passwords (OTPs) against OTP data bases such as SecureID.
- **LEAP:** Is an authentication method for use with Cisco WLAN access points. LEAP does not require the use of server or client certificates. LEAP supports Windows Active Directory and domains but requires the use of strong passwords to avoid vulnerability to off-line dictionary attacks.
- **EAP-FAST:** Is a successor to LEAP and does not require strong passwords to protect against off-line dictionary attacks. Like LEAP, EAP-FAST does not require the use of server or client certificates and supports Windows Active Directory and domains.

Note: PEAP and EAP-TLS require the use of Windows facilities for the configuration of digital certificates.

SCU EAP Types

The following EAP types are supported by the integrated supplicant and can be configured in SCU: PEAP-MSCHAP, PEAP-GTC, LEAP and EAP-FAST. With each of these four types, if authentication credentials are not stored in the profile, you will be prompted to enter credentials the first time the radio attempts to associate to an access point that supports 802.1X (EAP).

Consider the following when configuring one of the EAP types:

- **PEAP-GTC**: SCU supports static (login) passwords only.
- **LEAP:** Strong passwords are recommended.
- **EAP-FAST:** SCU supports automatic, not manual, PAC provisioning.

EAP-TLS will work with a 802.11b/g radio module when *Windows Zero Config (WZC)* rather than the SCU is used to configure the type. With WZC, the native Windows supplicant instead of the SCU integrated supplicant is used.

A.3.2   EAP Credentials

Keep the following in mind when defining security settings:

- If the credentials specified in the profile are incorrect and that profile is used, the authentication fails without an error message; you will not be prompted to enter correct credentials.

- If the credentials are not specified in the profile, when the radio tries to associate using that profile, you will be prompted to enter the credentials.

- When prompted, you can enter valid credentials, enter invalid credentials, or cancel the operation.

- If you enter valid credentials and tap **OK**, the radio will associate and authenticate.

- If you enter invalid credentials and tap **OK**, the radio will associate but will not authenticate; you will be prompted again to enter credentials.

- If you tap **Cancel** or clear the credentials fields and tap **OK**, the radio will not attempt to associate with that profile until you perform one of the following actions (while the profile is the *Active Profile*):
    - Cause the Ikôn to go through a power cycle or suspend/resume.
    - Disable and enable the radio, or tap the **Reconnect** button on the *Diags* windows.
    - Modify the *profile*, and tap on **Commit**.

Alternatively, you can choose another profile as the active profile and then switch back to the profile for which EAP authentication was cancelled.

A.3.3 ThirdPartyConfig

If you choose to configure *ThirdPartyConfig*, the *SCU* will work with the operating system's *Windows Zero Config* (WZC) to configure radio and security settings for the CF radio installed in the unit.

Choosing this *profile* means that *WZC* must be used to define the following radio and security options: *SSID*, *Auth Type*, *EAP Type* and *Encryption*. The SCU settings for *ThirdPartyConfig* include: *Client Name*, *Power Save*, *Tx Power*, *Bit Rate* and *Radio Mode*. These SCU settings along with SCU global settings and the WZC settings will be applied to the radio module.

A.4 Status Tab
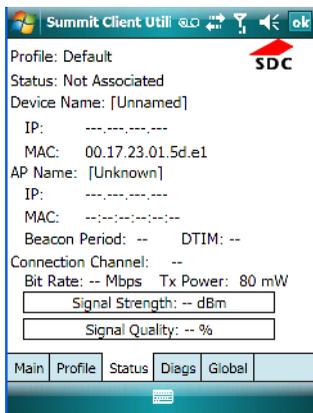
The *Status* tab provides status information including IP address and MAC address for the client radio, IP address and MAC address for the AP, signal strength, channel, transmit power and data rate.

A.5 Diags Tab
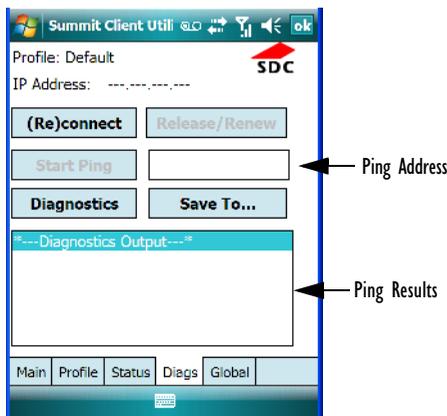
Use the *Diags* tab as a troubleshooting tool. The functions are as follows:

• **(Re)connect:** Enables/Disables the radio, applies/reapplies current profile and tries to associate and authenticate to the wireless LAN, logging all activity in the output area at bottom of the dialog box.

- **Release/Renew:** Obtains a new IP address through DHCP and logs all activity in the output area.

- **Start Ping/Stop Ping:** Starts a continuous ping to the address in the text box next to this button. This a toggle button so when you tap it, it changes to *Stop Ping*. Closing this window or tapping on another button also stops the ping.

- **Diagnostics:** Attempts to connect or reconnect to an AP, and provides a more detailed dump of data than if you used *(Re)connect*. The dump includes the radio state, profile settings, global settings and BSSID list of APs. The SCU is saved to a file called *_sdc_diag.txt* in the Windows directory.

A.6   Global Settings Tab
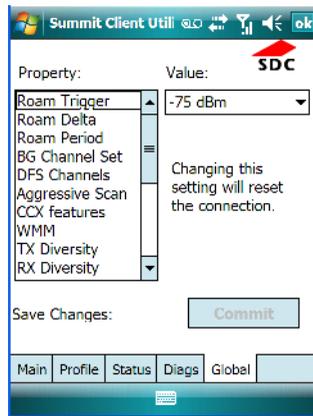
The *Global* settings tab allows you to define radio and security settings that apply to all *profiles*, along with settings that apply specifically to the *SCU*.

The *Global* settings in the table below can be edited in the *SCU*:

Global Setting	Description	Value	Default
Roam Trigger	If RSSI from AP is less than roam trigger value, radio performs roam scan or probes for an AP with stronger signal.	dBm: -50, -55, -60, -65, -70, -75, Custom	-75
Roam Delta	Amount by which second AP's RSSI must exceed the moving average RSSI for the current AP before the radio will attempt to roam to a second AP.	dBm: 5, 10, 15, 20, 25, 30, 35, Custom	10

Global Setting	Description	Value	Default
Roam Period	Following an association or roam scan (with no roam), the number of seconds the radio collects RSSI scan data before considering roaming.	Seconds: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, Custom	10
BG Channel Set	Defines the 2.4 GHz channels to be scanned when the radio is set to roam and needs to determine what APs are available.	Full (all channels) 1, 6, 11 1, 7, 13 Custom	Full
DFS Channels	Reserved	Off, On	Off
Aggressive Scan	When this setting is On and the current connection to an AP becomes unreliable, the radio scans for available APs more aggressively. Aggressive scanning complements and works in conjunction with the standard scanning that is configured through the Roam Trigger, Roam Delta, and Roam Period settings. It is recommended that Aggressive Scan is left On unless there is significant co-channel interference because of overlapping coverage from APs on the same channel.	Off, On	On
CCX features	Activates three CCX features: AP-assisted roaming, AP-specified maximum transmit power and radio management.	Optimized, Full, Off	Optimized
WMM	Use Wi-Fi Multimedia Extensions, also know as WMM.	On, Off	Off
TX Diversity	Defines how to handle antenna diversity when transmitting data to AP.	-Main only: Use main antenna only. -Aux only: Use auxiliary antenna only. -On: Use diversity.	Main only

Global Setting	Description	Value	Default
RX Diversity	Defines how to handle antenna diversity when receiving data from AP.	-On-Start on Main: On startup, use main antenna. -On-Start on Aux: On startup, use auxiliary antenna. -Main only: Use main antenna only. -Aux only: Use auxiliary antenna only.	On-Start on Main
Frag Thresh	Packet is fragmented when packet size (in bytes) exceeds threshold.	Integer from 256 to 2346.	2346
RTS Thresh	Packet size above which RTS/CTS is required on link.	An integer from 0 to 2347.	2347
LED	Available only with MCF10G.	On, Off	Off
Tray Icon	Enables the System Tray icon.	Off, On	Off
Hide Passwords	On - SCU as well as EAP authentication dialog boxes hide passwords, WEP keys and other sensitive information.	On, Off	Off
Admin Password	Password that must be specified when Admin Login button is pressed.	A string of up to 64 characters.	SUMMIT
Auth Timeout	Specifies the number of seconds that the software will wait for an EAP authentication request to succeed or fail. If authentication credentials are specified in the active profile and the authentication times out, then association will fail. If authentication credentials are not specified in the active profile and the authentication times out, then the user will be re-prompted to enter authentication credentials.	An integer from 3 to 60.	8
Certs Path	Directory where certificates for EAP authentication are stored.	Valid directory path up to 64 characters.	Dependent on device.

Global Setting	Description	Value	Default
Ping Payload	Amount of data to be transmitted on a ping.	Bytes: 32, 64, 128, 256, 512, 1024	32
Ping Timeout ms	Amount of time in milliseconds that passes without a response before ping request is considered a failure.	Integer from 0 to 30000.	5000
Ping Delay ms	Amount of time in milliseconds between successive ping requests.	Integer from 0 to 7200000.	1000

APPENDIX **B**

PORT PINOUTS

B.1   Dock Port Pinout

Pin #	Pin Name	Signal	Direction Relative To DPA	Comment
1	GND	DGND	-	
2	VDD_EXT_PWR	VDD_EXT_PWR	Input	These 3 pins are connected together.
3	VDD_EXT_PWR			
4	VDD_EXT_PWR			
5	BATT_OUT	VDD_BATT_OUT	Output	
6	AUDIO_P		Output	Audio positive.
7	AUDIO_N		Output	Audio negative.
8	VDD_USBOTG		Bi-directional	USB Power (+5.5V). As output, supplies external devices when Ikôn is in USB Host mode. As input, charges battery when Ikôn is in USB Client mode.
9	DOCK_ID		Input	Dock ID.
10	USB_OTG_DN		Bi-directional	
11	USB_OTG_DP		Bi-directional	

Pin #	Pin Name	Signal	Direction Relative To DPA	Comment
12	USB_OTG_ID		Input	
13	GND	DGND	-	
14	TXDATA		Output	RS-232 data transmit. Max bit rate 115 kbits/sec.
15	RXDATA		Input	RS-232 data receive. Max bit rate 115 kbits/sec.
16	GND	DGND	-	

B.2   Audio Port Pinout

Pin #	Pin Name	Direction Relative To DPA	Comment
1	HPR	Output	Headphone output.
2	HP_DETECT	Input	
3	N/C	-	Not connected.
4	MIC	Input	Microphone.
5	N/C	-	Not connected.
6	DGND	-	Ground.

B.3   DC IN Port Pinout

Pin #	Signal	Comment
1	DGND	Side contact.
2	DGND	Side contact.
3	VDD_ACDC	Center contact pin.

B.4   Battery Contact Pinout

PIN #	Signal Name	Description
1	BATT-RAW	Positive lead of battery
-		Provides mechanical polarity
2	BATT-RAW	Positive lead of battery
3	BATT-CLK	SMBus data clock
4	BATT-THERM	Thermistor 10K NTC
5	BATT-DATA	SMBus bi-directional data line
6	GND	Negative lead of battery
7	GND	Negative lead of battery

APPENDIX C

TEKLOGIX IMAGERS APPLET

The *Teklogix Imagers* applet is used to create, modify, delete and activate imager settings. The principle uses of the applet are to decode bar codes and to capture images. A *Demonstration Application* is provided to demonstrates how the imager works. Refer to "PTSI Imager Demo" on page 95 for details.

C.1 Required Applets

In order to configure imaging, the *Manage Triggers* and *Teklogix Scanners* applets must be present in the *Settings>System* tab along with the *Teklogix Imagers* applet.

C.2 Presets

There are two methods that can be used to configure an imager using the *Teklogix Imagers* applet:

- Use a predefined preset.
- Create a custom preset based on a predefined preset.

⚠️ *Important: It is strongly recommended that a predefined preset is used whenever possible. Each predefined preset contains a coherent group of settings that are known to work together in the intended environment. In almost all situations, at least one of the predefined presets results in a satisfactory outcome.*

A *preset* is a group of exposure and image correction settings. Each preset configures the imager for a specific purpose such as bar code decoding or image capture.

Presets also allow easier and faster configuration of the imager after power-on or resume from suspend.

The predefined presets are generic and satisfy most user requirements. A custom preset can be created for a specific user application, such as: include only specified bar codes, read only a specified number of bar codes or for reading unusual media.

Every preset belongs to a preset type. The following preset types are available:

- Imaging for photo capture.
- Imaging for bar code decoding.
- Symbology selection.

At any time, only one preset of each type can be designated as the user-selected *active* preset.

C.2.1 Predefined Presets

Predefined presets are built into the imaging software and cannot be changed. The predefined presets allow you to use the imager to perform specified tasks without having to understand and set numerous variables. In almost all cases these predefined presets are sufficient.

C.2.2 Bar Code Predefined Presets

These presets encompass the majority of the most popular bar codes and their subtypes. The *bar code decoding symbology* predefined presets define which bar codes can be decoded. The *bar code decoding camera* predefined presets determine how the bar code images are captured

C.2.2.1 Bar Code Decoding Symbology Predefined Presets

The following presets select groups of similar bar codes for decoding.

Note: It is recommended that the default preset be used whenever possible.

Factory Default

This preset enables the decoding of frequently used bar codes.

My Default

This preset is synchronized with the *Teklogix Scanners* applet and contains all the symbologies selected using the *Teklogix Scanner* applet. For details on this synchronization see, "Configuring Symbologies in the Teklogix Imagers Applet" on page C-17.

All

This preset enables the decoding of all bar codes that the imager can decode. For a description of these symbologies see "Imager" on page D-37.

Linear

This preset enables the decoding of all the 1D symbologies that the imager can decode. See "Imager" on page D-37 for a description of these symbologies.

Linear and PDF417

This preset enables the decoding of all the 1D and PDF symbologies that the imager can decode. See "Imager" on page D-37 for a description of these symbologies.

Matrix

This preset enables the decoding of all 2 D symbologies that the imager can decode. See "Imager" on page D-37 for a description of these symbologies.

Postal

This preset enables the decoding of all the postal symbologies that the imager can decode. See "Imager" on page D-37 for a description of these symbologies.

C.2.3   Bar Code Decoding Camera Predefined Presets

The following presets enable successful bar code image capture in almost all conditions.

Note: It is recommended that the default preset be used whenever possible.

Default

This preset works in a wide range of conditions. It is optimized for a normal office lighting (about 300 Lux).

Low light

This preset is designed for very dark conditions such as inside a warehouse where the lights are kept low, or inside an unlit truck. This preset increases either the exposure time or the gain.

Low power

This preset minimizes the use of the flash so as to conserve the battery power on the Ikôn.

Glossy surface

This preset minimizes the use of the flash so as to reduce reflection. This preset is used to read bar codes that are behind glass, or inside the plastic window of an envelope.

C.2.4 Image Capture Predefined Presets

The following presets enable successful image capture in almost all conditions.

Note: It is recommended that the default preset be used whenever possible.

Default

This preset works in a wide range of conditions. It is optimized for a normal office lighting (about 300 Lux).

Motion

This preset uses a shorter exposure time so as to freeze motion.

Low light near

This preset is designed for dark conditions, it uses a longer exposure time and includes the flash.

C.3 Using The Teklogix Imagers Applet

C.3.1 Configuring The Image Capture Presets

To configure the image capture presets, open the dialog box as follows:

- Tap on **Start>Settings>System** tab.
- Tap on the **Teklogix Imagers** icon, and if it's not already selected, tap on the **Imaging** tab.

The following screen is displayed:

Figure C.1 Imaging Tab
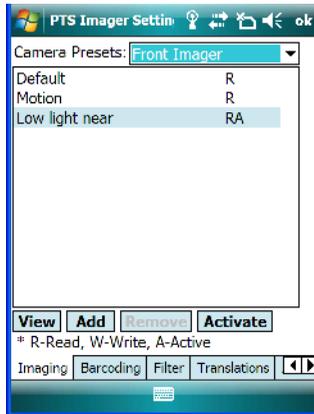
This window lists all the presets, both predefined and custom. Presets are identified as follows:

• Predefined presets are marked as *read-only*.

• Custom presets are marked as *read and write*.

• One preset – either predefined or custom – is marked as *active*.

C.3.2 Selecting A Camera

If your Ikôn has more than one built-in camera, one camera must be selected for configuration. To select a camera:

• Tap on the **Camera Presets** dropdown menu to view the camera options.

• Choose a **camera** – either *Front Imager*, the imager located at the top of the unit, or *Bottom Colour Camera*, the camera located at back of the Ikôn.

⚠️ *Important: Currently, only the 'Front Imager' can be used to read bar codes. The 'Bottom Colour Camera' is limited to taking photos.*

C.3.3 Setting The Active Preset

An active preset has an *A* to the right; in Figure C.1 on page C-5, the active preset is *Low light near*. To set an active preset:

• Highlight the preset, and tap on the **Activate** button.

C.3.4   Viewing A Preset

To view the parameter settings in a preset:

- Highlight a preset, and tap on the **View** button.

The associated preset window is displayed.
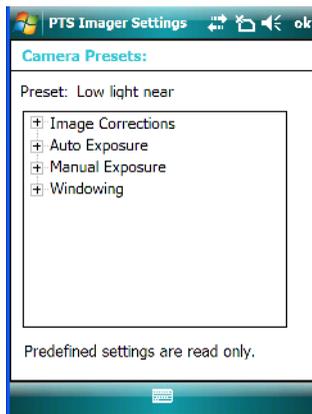
- Tap on the + sign to expand the lists so that you can view the parameter settings.

C.3.5   Creating A Custom Preset

A new custom preset is created by modifying a preset – either a predefined preset or an existing custom preset. To create a custom preset:
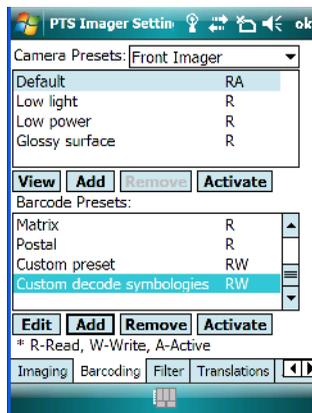
- Highlight a preset, and tap on the **Add** button.

In this example, the *Low light near* preset was chosen. A screen like the sample below is displayed.
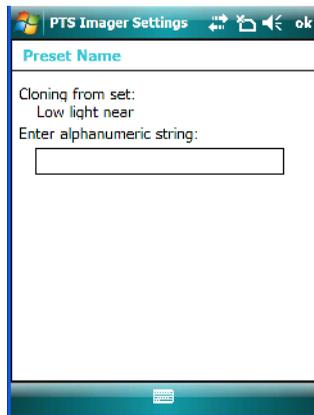
• Type the **name** of the new preset in the dialog box.

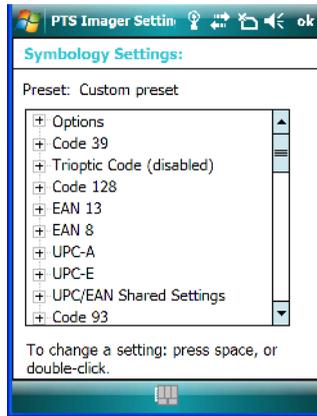• Tap on **OK** to save your changes.

The preset list is displayed; the new custom preset appears at the end of the list. It is marked as read and write.

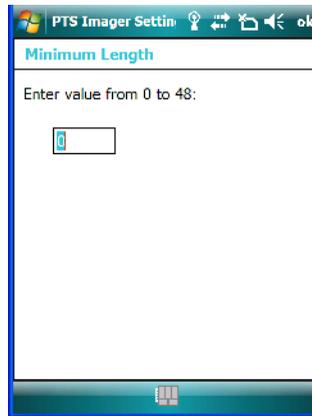## C.3.6 Modifying A Custom Preset

The parameter values in a custom preset can be modified. It is recommended that very few changes be made to a custom preset. To ensure that it will work reliably, it should be as close as possible to the original predefined preset. To change a parameter value:

• Highlight the custom preset, and tap on the Edit button.

• Tap on the + symbols to expand the lists so that you can view the parameter settings.

• Scroll through the parameter list until you reach the parameter that you want to change.

• For a parameter that can take a *range* of values:

  - Highlight the parameter, and then press the [SPACE] key or double-click the parameter.

  - An associated dialog box containing the valid range of values for the parameter and the current setting like the sample screen following is displayed.

  - Type a value in the field provided.

• For a parameter that toggles between two values such as *on* or *off* and *enabled* or *disabled*:

- Highlight the parameter and then press the [SPACE] key, or double-click on the parameter. Either method toggles between the two available values.

• When you've completed your edits, tap on **OK**.

The parameter list is displayed; the new value for the changed parameter is shown.

• Tap on **OK** to exit to the preset list and save the changes.

C.3.7   Removing A Custom Preset

• Highlight the custom preset you want to delete, and tap on the **Remove** button.

A window is displayed warning you that you are about to remove a preset.

• Tap on **Yes** to remove the preset or **No** to cancel the operation.

C.4   Configuring The Bar Code Decoding Camera Presets

To configure the bar code decoding camera presets:

• Tap on **Start>Settings>System** tab.

• Tap on the **Barcoding** tab.

Figure C.2 Bar Code Presets
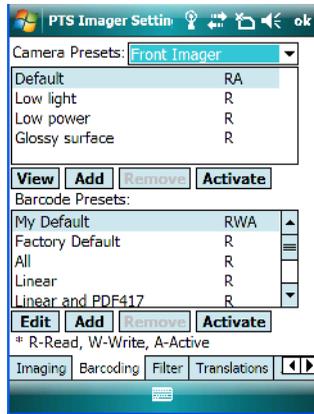
This window lists all the presets, both predefined and the custom. Presets are identified as follows:

• Predefined presets are marked as read-only. For a description, review "Predefined Presets" on page C-2.

• Custom presets are marked as read and write.

• One preset – either predefined or custom – is marked as active.

Note: The top portion of the window displays the bar code decoding camera presets.

The top port of the window displays the bar code decoding camera presets.

C.4.1 Selecting A Camera

If your Ikôn has more than one built-in camera, one camera must be selected for configuration. To select a camera:

• Tap on the **Camera Presets** dropdown menu to view the camera options.

• Choose a **camera** – either *Front Imager*, the imager located at the top of the unit, or *Bottom Colour Camera*, the camera located at back of the Ikôn.

Important: Currently, only the 'Front Imager' can be used to read bar codes. The 'Bottom Colour Camera' is limited to taking photos.

C.4.2 Setting The Active Preset

An active preset has an *A* to the right; in Figure C.2 on page page C-9, the active preset is *Defaults*. To set an active preset:

• Highlight the preset, and tap on the **Activate** button.

C.4.3 Viewing A Preset

To view the parameter settings in a preset:

• Highlight a preset, and tap on the **View** button.

The associated preset window is displayed.
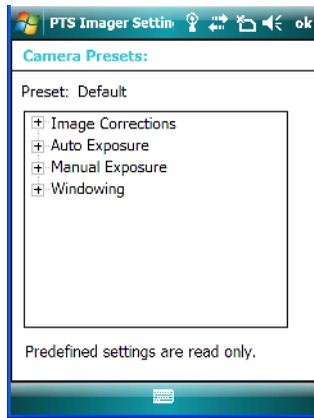
• Tap on the + sign to expand one of the lists so that you can view the parameter settings.

C.4.4 Creating A Custom Preset

A new custom preset is created by modifying a preset – either a predefined preset or an existing custom preset. To create a custom preset:

• Highlight a preset, and tap on the **Add** button.

A screen like the sample following is displayed.
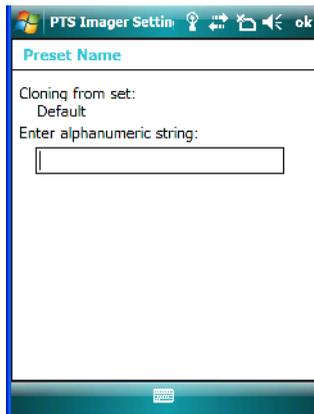
• Type the **name** of the new preset in the dialog box.
• Tap on **OK** to save your changes.

The preset list is displayed; the new custom preset appears at the end of the list. It is marked as read and write.

C.4.5   Modifying A Custom Preset

The parameter values in a custom preset can be modified. It is recommended that very few changes be made to a custom preset. To ensure that it will work reliably, it should be as close as possible to the original predefined preset. To change a parameter value:

• Highlight the custom preset, and tap on the Edit button.

• Tap on the + symbols to expand the lists and view the parameter settings.
• Scroll through the parameter list until you reach the parameter that you want to change.
• For a parameter that can take a *range* of values:

- Highlight the parameter, and then press the [SPACE] key or double-click the parameter.
- An associated dialog box containing the valid range of values for the parameter and the current setting like the sample screen following is displayed.

- Type a value in the field provided.
- For a parameter that toggles between two values such as *on* or *off* and *enabled* or *disabled*:
  - Highlight the parameter and then press the [SPACE] key, or double-click on the parameter. Either method toggles between the two available values.
- When you've completed your edits, tap on **OK**.

The parameter list is displayed; the new value for the changed parameter is shown.

- Tap on **OK** to exit to the preset list and save the changes.

C.4.6 Removing A Custom Preset

- Highlight the custom preset you want to delete, and tap on the **Remove** button.

A window is displayed warning you that you are about to remove a preset.

- Tap on **Yes** to remove the preset or **No** to cancel the operation.

C.4.7 Configuring The Bar Code Decoding Symbologies

To configure the bar code decoding camera presets:

- Tap on **Start>Settings>System** tab.
- Tap on the **Barcoding** tab.

Figure C.3 Viewing Bar Code Decoding Symbologies
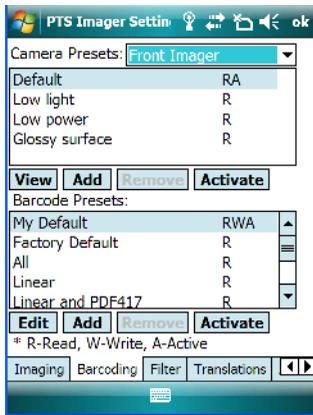
C.4.8 Setting The Active Preset

An active preset has an *A* to the right; in Figure C.2 on page page C-9, the active preset is *Defaults*. To set an active preset:

• Highlight the preset, and tap on the **Activate** button.

C.4.9 Viewing A Preset

To view the parameter settings in a preset:

• Highlight a preset, and tap on the **View** button.

The associated preset window is displayed.
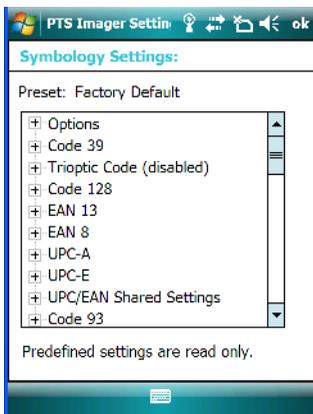
• Tap on the + sign to expand one of the lists so that you can view the parameter settings.

C.4.10 Creating A Custom Preset

A new custom preset is created by modifying a preset – either a predefined preset or an existing custom preset. To create a custom preset:

• Highlight a preset, and tap on the **Add** button.

A screen like the sample following is displayed.
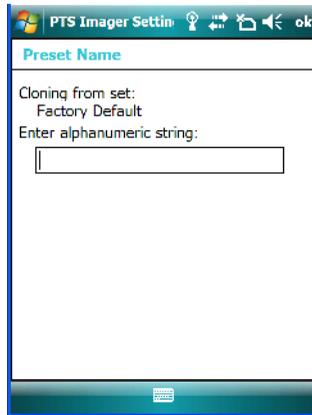
• Type the **name** of the new preset in the dialog box.

• Tap on **OK** to save your changes.

The preset list is displayed; the new custom preset appears at the end of the list. It is marked as read and write.

C.4.11 Modifying A Custom Preset

The parameter values in a custom preset can be modified. It is recommended that very few changes be made to a custom preset. To ensure that it will work reliably, it should be as close as possible to the original predefined preset. To change a parameter value:

- Highlight the custom preset, and tap on the Edit button.

- Tap on the + symbols to expand the lists and view the parameter settings.
- Scroll through the parameter list until you reach the parameter that you want to change.
- For a parameter that can take a *range* of values:
  - Highlight the parameter, and then press the [SPACE] key or double-click the parameter.

- An associated dialog box containing the valid range of values for the parameter and the current setting like the sample screen following is displayed.

- Type a value in the field provided.
- For a parameter that toggles between two values such as *on* or *off* and *enabled* or *disabled*:
    - Highlight the parameter and then press the [SPACE] key, or double-click on the parameter. Either method toggles between the two available values.
- When you've completed your edits, tap on **OK**.

The parameter list is displayed; the new value for the changed parameter is shown.

- Tap on **OK** to exit to the preset list and save the changes.

C.4.12 Removing A Custom Preset

- Highlight the custom preset you want to delete, and tap on the **Remove** button.

A window is displayed warning you that you are about to remove a preset.

- Tap on **Yes** to remove the preset or **No** to cancel the operation.

C.4.13 Configuring Symbologies in the Teklogix Imagers Applet

All changes made in the *Symbologies Presets* in the *Imagers Applet* are also made in the *Scanners Applet*. The Scanner Applet will reflect the settings of whichever Symbologies Preset is made active in the Imager Applet.

Configuring Symbologies In The Teklogix Scanners Applet

When a symbology is enabled or configured using the Teklogix Scanners applet, the changes are also made in the **My Default** preset. **My Default** automatically becomes the active bar code symbology preset.

None of the other bar code decoding predefined presets is changed.

Configuring Symbologies In The My Default Preset

When My Default is the active preset

In this case, the changes to the symbology configuration are also made in the Teklogix Scanners applet.

When My Default is not the active preset

In this case, the changes to the symbology configuration are not made in the Teklogix Scanners applet.

C.4.14 Filter Tab – Manipulating Bar Code Data

To configure rules for manipulating bar code data:

- Tap on **Start>Settings>System** tab.
- Tap on the **Teklogix Imagers** icon, and then tap on the **Filter** tab.
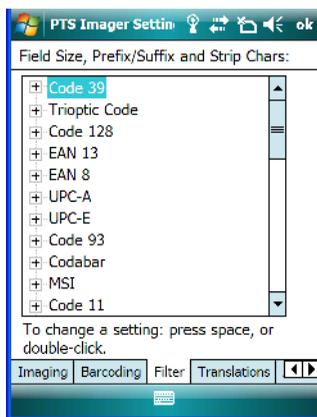
C.4.14.1 Modifying A Bar Code Setting

The rules for manipulating data from selected bar code symbologies can be modified. To change the settings for a symbology:

- Tap on the + symbols to expand the lists and view the parameter settings.

- Scroll through the parameter list until you reach the parameter that you want to change.
- For a parameter that can take a *range* of values:
  - Highlight the parameter, and then press the [SPACE] key or double-click the parameter.
  - An associated dialog box containing the valid range of values for the parameter and the current setting like the sample screen following is displayed.
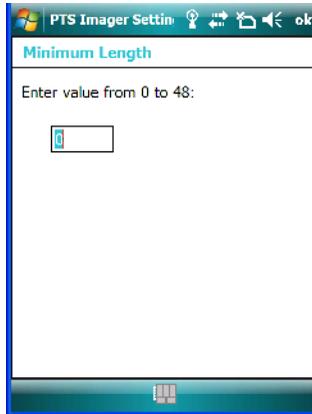
- Type a value in the field provided.
- For a parameter that takes a single character:
  - Highlight the parameter and then press the [SPACE] key, or double-click on the parameter. The following screen is displayed:
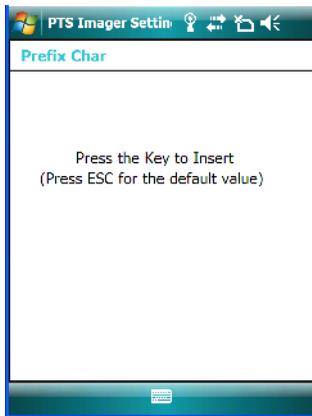
- When you've completed your edits, tap on **OK**.

C.4.15 Translation Tab – Configuring Rules

Translation rules enable the automatic processing of bar code data. Up to 10 cases can be defined, each consisting of up to 10 sequential rules.

Note: Changes made to the translations configuration using the Teklogix Scanner Control Panel program are synchronized with changes made here. Changes made in either place affect both translation tables.

• Tap on **Start>Settings>System** tab.

• Tap on the **Teklogix Imagers** icon, and then tap on the **Translation** tab.
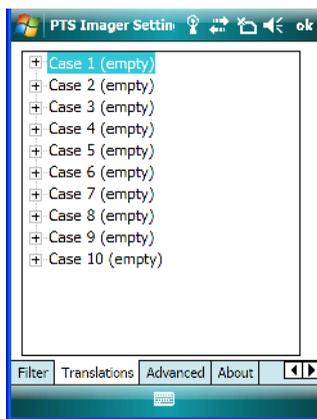
For instructions on adding, editing, and removing translation rules, refer to the "Translations Tab" on page 180.

C.4.16 Advanced Tab

C.4.16.1 File Locations For Captured Images

To configure the location for saved images, open the dialog box as follows:

• Tap on **Start>Settings>System** tab.

• Tap on the **Teklogix Imagers** icon, and then tap on the **Translation** tab.

To define the location where imager files will be stored:

• Tap on the **File Location** button.
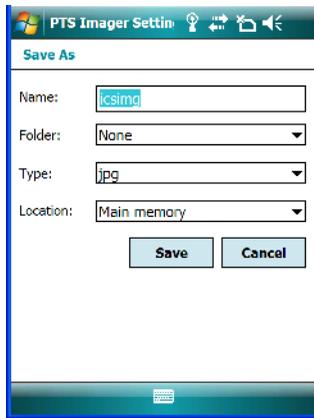
• Type the file **Name**, choose the **Folder** and file **Type**.
• Choose the **Location** in which your files will be saved.
• When you have completed all the changes, tap on the **Save** button.

C.4.16.2 Configuring Triggers

Viewing The Trigger Configuration

The trigger on the Ikôn PDA is configured using the *Manage Triggers* applet. The *Teklogix Imagers* applet provides a shortcut to the *Manage Triggers* applet.

• In the *Advanced* tab, tap on the **Trigger Control** button.

- To view all the triggers and the hardware devices that are configured to use them, tap in the checkbox next to **Show all modules**.
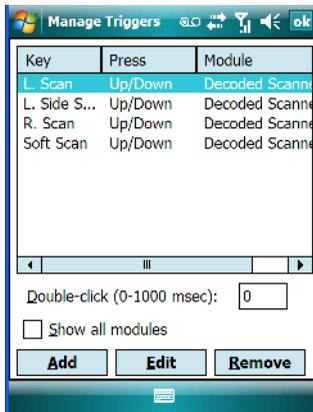
Adding, Editing And Removing Triggers

For instruction about adding, editing and removing triggers, refer to "Manage Triggers" on page 159.

C.5   Teklogix Scanners Applet

The bar code symbologies that are to be read by the imager can be enabled using the *Teklogix Scanners* applet. Tapping on **Start>Settings>System** tab followed by the **Teklogix Scanners** icon displays this applet. Refer to "Imager" on page D-37 for a list of symbologies.

⚠️ *Warning: **Changes made to the symbology configuration using the Teklogix Scanner applet are synchronized only with the My Defaults bar code symbology preset. For details, refer to "Configuring Symbologies in the Teklogix Imagers Applet" on page C-17.***

BAR CODES SETTINGS

D.1 Scanner Menu
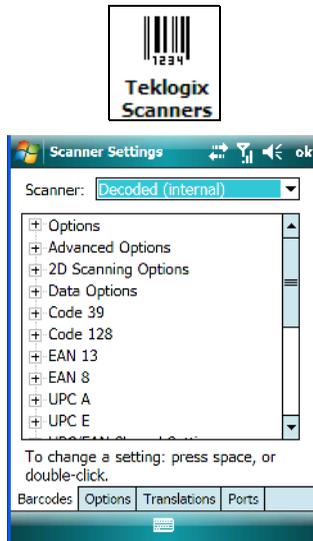
The dropdown menu to the right of the *Scanner* option allows you to choose from one of the following scanner types used with your Ikôn: *Decoded (internal)*, *Decoded (Intermec ISCP)* or *Imager*.

The symbologies listed change to reflect the scanner you choose and the bar codes it supports.

⚠️ *Important: **To improve the decode speed and performance, enable only those codes that are required by the application.***

Keep in mind that some bar code types are only available when an internal imaging scanner is installed. All internal scanners can be configured using the *Barcode* dialog boxes.

D.2   Decoded (Internal) Scanner
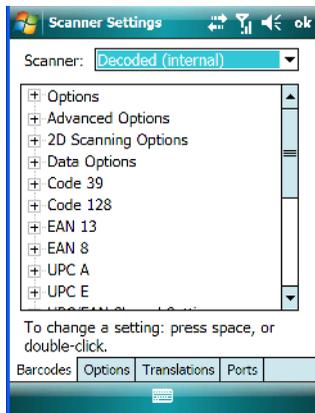
D.2.1   Options – Decoded (Internal) Scanner

Dot Time (msec)

The value selected for "Dot Time (msec)" determines (in milliseconds) how long the targeting dot remains on before the scanner switches to a normal scan sweep. When you double-tap on this parameter, a dialog box is displayed in which you can enter a value of 0 msec, 200 msec or 400 msec. A value of 0 (zero) disables the target dot.

Aim Duration

This parameter determines the total time the aiming pattern appears before the scanner laser begins sweeping. When you double-tap on this parameter, a dialog box is displayed in which you can enter a value from 0 to 30 (0 to 3 sec.). A value of 0 (zero) disables the aiming dot.

Laser On Time

The value assigned to this parameter determines how long the laser will remain on when the scan button or trigger is pressed.

Double-tapping on this parameter displays a dialog box in which you can enter a value between 5 and 99, each number representing 0.1.

D.2.2 Advanced Options – Decoded (Internal)

Continuous Scan Mode

Setting this parameter to 'on' keeps the laser on and continuously decoding as long as the scanner button is pressed and held down.

Minimum Cancel Time

The value assigned to this parameter determines the time delay before the scanner is turned off, once the scanner trigger or button is released. This gives the scanner a minimum amount of time to complete its current decode before the scan is cancelled when the user quickly triggers on/off.

Power Mode

This parameter is a power-saving option. Tapping on it displays a screen listing two power mode options: *Continuous Power* and *Low Power*.

In *Continuous Power* mode, the scanner is always on, waiting for a trigger pull or a serial communication.

In *Low Power* mode, the scanner is in a standby state, drawing minimal power until a trigger pull or serial communication wakes it. Keep in mind that while this option is more suitable for battery powered applications, there will be a slight delay while the scanner powers up to scan a bar code.

Low Power Timeout

To extend laser life, you can select the length of time the scanner remains active following a successful decode. The scanner wakes from low power mode when a bar code is scanned – a successful decode restores normal blinking.

When you double-tap on this parameter, a dialog box is displayed in which you can choose a value of 30 sec, 1 min, 2 min or 3 min.

Note: This parameter is only used if the Trigger Mode has been set to Continuous On and the Ikôn is mounted in a fixed position; otherwise, 'Low Power Timeout' is not used.

Parameter Scanning

Setting this parameter to on enables decoding of parameter bar codes.

Linear Security Level

This parameter allows you to select the security level appropriate for your bar code quality. There are four levels of decode security for linear code types (e.g., Code 39, Interleaved 2 of

5). Higher security levels should be selected for decreasing levels of bar code quality. As security levels increase, the scanner's decode speed decreases.

Double-tapping on this parameter displays a dialog box in which you can enter a value from 1 to 4.

"Linear security level 1" specifies that the following code types must be successfully read twice before being decoded:

Code Type	Length
Codabar	All
MSI Plessey	4 or less
D 5 of 5	8 or less
I 2 of 5	8 or less

"Linear security level 2" specifies that all types of codes must be successfully read twice before being decoded.

"Linear security level 3" specifies that code types other than the following must be successfully read twice before being decoded. The following codes must be read three times:

Code Type	Length
MSI Plessey	4 or less
D 2 of 5	8 or less
I 2 of 5	8 or less

"Linear security level 4" requires that all code types be successfully read three times before being decoded.

Bi-Direction Redundancy

Note: This parameter is only valid if a "Linear Security Level" is enabled.

When this parameter is enabled, a bar code must be successfully scanned in both directions (forward and reverse) before being decoded.

Scan Angle

This option allows you to choose from two scan angles: *Normal Angle* or *Alternate Angle*. Choosing *Normal Angle* allows the normal operation for scanning long range and short range. Choosing *Alternate Angle* widens the beam to allow scanning of long bar codes at short range but at the cost of long range scanning.

D.2.3   Decoded (Internal) 2D Scanning Options

Scanning Mode

When you double-tap on this parameter, a dialog box is displayed in which you can choose one of the following scanning modes: Smart Raster, Always Raster, Programmable Raster, Slab Pattern, Cyclone Pattern or Semi-Omni Pattern.

Raster Height And Raster Expand Rate

These parameter determine the laser pattern's height and rate of expansion.

Note: These parameters are only used when either Programmable Raster or Always Raster is assigned to the "2D Scanning Mode" parameter. "2D Raster Height" and "2D Raster Expand Rate" are intended for very specific applications and are usually not required for normal scanning purposes.

Double-tapping on this parameter displays a dialog box in which you can enter a value from 1 to 15.

D.2.4   Data Options — Decoded (Internal) Scanner

Transmit Code ID Char

A code ID character identifies the scanned bar code type. In addition to any single character prefix already selected, the code ID character is inserted between the prefix and the decoded symbol.

When you double-tap on this parameter, a dialog box is displayed in which you can choose a transmit code: None, AIM or Symbol.

Scan Data Format

This parameter allows you to change the scan data transmission format. Double-tapping on "Scan Data Format" displays the following options from which you can choose a data format: data (as-is), data [S1], data [S2], data [S1][S2], [P] data, [P] data [S1], [P] data [S2] and [P] data [S1][S2].

Prefix [P], Suffix [S1] And Suffix [S2]

A prefix and/or one or two suffixes may be appended to scan data for use in data editing.

When you double-tap on these parameters, a dialog box is displayed in which you can enter a value from 0 to 255.

Delete Char Set ECIs

Setting this parameter to *on* enables the scanner to delete any escape sequences representing Character Set ECIs – Extended Channel Interpretations (also known as GLIs) from its buffer before transmission.

When this parameter is enabled, the scanner transmits data from PDF417 and MicroPDF417 bar codes containing Character Set ECIs, even when the ECI Protocol is disabled.

ECI Decoder

Setting this parameter to *on* enables the scanner to interpret any Extended Channel Interpretations (ECIs) supported by the scanner. This parameter has no effect on symbols that were not encoded using ECIs.

If this parameter is set to *off* and a symbol that was encoded using an ECI escape is scanned, the scanner transmits the ECI escape followed by the uninterpreted data.

D.2.5 Code 39

Enabled

Setting this parameter to on enables "Code 39".

Enable Trioptic Code 39

Note: "Trioptic Code 39" and "Full ASCII" should not be enabled simultaneously. The scanner does not automatically discriminate between these two symbologies.

Trioptic Code 39 symbols always contain six characters. Setting this parameter to *on* allows this type of symbology to be recognized.

Convert To Code 32

Note: "Code 39" must be enabled in order for this parameter to function.

Setting this parameter to *on* allows the scanner to convert the bar code from "Code 39" to "Code 32".

Code 32 Prefix

Note: "Convert to Code 32" must be enabled in order for this parameter to function.

When this parameter is enabled, the prefix character "A" is added to all "Code 32" bar codes.

Set Length L1 And Set Length L2

Lengths for "Code 39" can be set for *Any length, Length within a range, One discrete length* or *Two discrete lengths*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on this parameter displays a dialog box labelled *Set Code Lengths* where you can define the code length that will be decoded by your scanner.
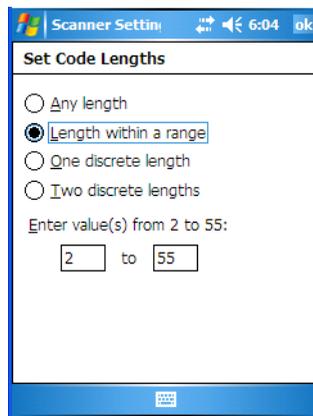
Choosing *One discrete length* allows you to decode only those codes containing a selected length. Choosing *Two discrete lengths* allows you to decode only those codes containing two selected lengths. *Length within a range* allows you to decode a code type within a specified range from 1 to 55.

Check Digit Verification

When this parameter is enabled (set to *on*), the integrity of a "Code 39" symbol is checked to ensure that it complies with specified algorithms.

Note: Only those "Code 39" symbols that include a Mod 43 check digit are decoded when this parameter is enabled.

Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must to enabled.

Full ASCII

If this parameter is enabled, the characters +, %, and / are used as escape characters. The combination of an escape character and the next character is converted to an equivalent ASCII character.

Decode Performance

If this parameter is enabled, one of three decode levels can be chosen in the "Decode Performance Level" parameter.

Decode Perf. Level

This parameter provides three levels of decode performance or "aggressiveness" for Code 39 symbols. Increasing the performance level reduces the amount of required bar code orientation – this is useful when scanning very long and/or truncated bar codes. Keep in mind that increased levels reduce decode security.

When you double-tap on this parameter, a dialog box is displayed in which you can enter a decode performance level of between 1 and 3.

Length Restriction

The parameters in this sub-menu allow you to define the length of the bar codes that will be decoded using either the *Field Size* parameter or the *Minimum Size* and *Maximum Size* parameters (see below). The order of operation to either match the *Field Size* or determine if the length falls between the *Minimum Size* and *Maximum Size* is as follows:

• Strip the leading and trailing characters.
• Add the prefix and suffix characters.
• Count the number of characters remaining to either match the field size or determine if the length falls between the minimum and maximum size.

Field Size

When a value is assigned for this parameter, only bar codes that match the field size exactly can be transmitted. If a value is assigned to this parameter, a *Minimum Size* and *Maximum Size* value is not required.

Minimum Size And Maximum Size

When a value is assigned to these parameters, only bar code lengths that fall between the minimum and maximum value can be decoded. If values are assigned to these parameters, a *Field Size* value is not required.

Add/Remove Data

Prefix Char

This character, if non-zero, is added before a successfully decoded bar code. Press the key you want to insert in the dialog box attached to this parameter. The ASCII/Unicode key value of the keypress is displayed.

Suffix Char

This character, if non-zero, is added after a successfully decoded bar code. Press the key you want to insert in the dialog box attached to this parameter. The ASCII/Unicode key value of the keypress is displayed.

Strip Leading

This parameter determines the number of characters that will be removed from the beginning of the bar code before the prefix character is added.

*Note: For Code 39 bar codes, the "AIAG Strip" is performed **before** the "Strip Leading".*

Strip Trailing

The value entered in this parameter determines the number of characters that will be removed from the end of the bar code before the suffix character is added.

D.2.6   Code 128

Enabled

Set this parameter to *on* to enable "Code 128".

Enable GS1-128/GS1 US

Previously UPC/EAN and UCC, these types of bar codes include group separators and start codes.

Enable ISBT 128

To successfully scan this variation, "Enable ISBT 128" must be set to *on*.

Decode Performance

If this parameter is set to on, one of three decode levels assigned to the "Decode Performance Level" parameter can be selected.

Decode Perf. Level

This parameter provides three levels of decode performance or "aggressiveness" for Code 128 symbols. Increasing the performance level reduces the amount of required bar code orientation – this is useful when scanning very long and/or truncated bar codes. Keep in mind that increased levels reduce decode security.

When you double-tap on this parameter, a dialog box is displayed in which you can enter a decode performance level of between 1 and 3.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.2.7   EAN 13

Enabled

Set this parameter to *on* to enable "EAN 13".

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.2.8   EAN 8

Enabled

Set this parameter to *on* to enable "EAN 8".

EAN-8 Zero Extend

When this parameter is enabled, five leading zeros are added to decoded EAN-8 symbols, making them compatible in format to EAN-13 symbols. Disabling this parameter returns EAN-8 symbols to their normal format.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.2.9   UPC A

Enabled

Set this parameter to *on* to enable "UPC A".

UPC-A Check Digit

If you enable this parameter, the check digit is included with the decoded bar code data.

UPC-A Preamble

When you double-tap on this parameter, a dialog box is displayed where you can choose one of three options for lead-in characters for UPC-A symbols transmitted to the host device: *System Char* – system character transmitted with the data, *Country code and System Char* – both the country code ("0" for USA) and system character are transmitted with the or *None* – no preamble is transmitted. The lead-in characters are considered part of the symbol.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.2.10   UPC E

Enabled UPC-E

Set this parameter to *on* to allow "UPC E" bar code scans.

Enabled UPC-E1

Set this parameter to on to allow "UPC-E1" (zero suppressed) bar code scans.

UPC-E And UPC-E1 Check Digit

If you enable one or both of these parameters, a check digit is included with the decoded bar code data.

UPC-E And UPC-E1 Preamble

When you double-tap on one of these parameters, a dialog box is displayed where you can choose one of three options for lead-in characters for UPC-E and UPC-E1 symbols transmitted to the host device: *System Char* – system character transmitted with the data, *Country code and System Char* – both the country code ("0" for USA) and system character are transmitted with the data or *None* – no preamble is transmitted. The lead-in characters are considered part of the symbol.

Conv. UPC-E To UPC-A

This parameter converts UPC-E (zero suppressed) decoded data to UPC-A format before transmission. After conversion, data follows UPC-A format and is affected by UPC-A programming selections (e.g., Preamble, Check Digit).

Conv. UPC-E1 To UPC-A

This parameter converts UPC-E1 (zero suppressed) decoded data to UPC-A format before transmission. After conversion, data follows UPC-A format and is affected by UPC-A programming selections (e.g., Preamble, Check Digit).

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.2.11   UPC/EAN Shared Settings

The parameters you set here are a shared across all available UPC and EAN bar codes.

Enable Bookland EAN

Setting this parameter to on allows your scanner to recognize "Bookland EAN" bar codes.

Supplementals

"Supplementals" are additionally appended characters (2 or 5).

Double-tapping this parameter displays a list of options. If *Ignore* is chosen, UPC/EAN is decoded and the supplemental characters are ignored. If *Decode* is chosen, UPC/EAN symbols are decoded with supplementals. *Autodiscriminate* works in conjunction with the "Supp. Redundancy" parameter.

Supp. Redundancy

With *Autodiscriminate* selected in the "Supplementals" parameter, "Supp. Redundancy" adjusts the number of times a symbol without supplementals is decoded before transmission.

When you double-tap on this parameter, a dialog box is displayed in which you can enter a value between 2 and 20. A value of 5 or above is recommended when Autodiscriminate is selected and you are decoding a mix of UPC/EAN symbols with and without supplementals.

Security Level

This parameter controls the tolerance for decoding edge-to-edge UPC/EAN bar codes. Double-tapping on this parameter displays a dialog box in which you can choose a level

from 0 to 3. Lower values have a lower tolerance for misreads, but they also increase the time it takes to decode the bar code.

Linear Decode

"Linear Decode" applies to code types containing two adjacent blocks (e.g., UPC-A, EAN-8, EAN-13). When enabled (set to on), a bar code is transmitted only when both the left and right blocks are successfully decoded within one laser scan. This option should be enabled when bar codes are in proximity to each other.

2D UPC Half Block Stitching

Setting this parameter to on enables "UPC Half Block Stitching" for the SE 3223 omnidirectional engine only.

D.2.12   Code 93

Enabled

Set this parameter to *on* to enable "Code 93" or *off* to disable it.

Set Length L1 And Set Length L2

Lengths for "Code 93" can be set for *Any length*, *Length within a range*, *One discrete length* or *Two discrete lengths*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on this parameter displays a dialog box labelled *Set Code Lengths* where you can define the code length that will be recognized by your scanner.

Choosing *One discrete length* allows you to decode only those codes containing a selected length. Choosing *Two discrete lengths* allows you to decode only those codes containing two selected lengths. *Length within a range* allows you to decode a code type within a specified range from 4 to 55.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.2.13   Codabar

Enabled

Set this parameter to on to enable "Codabar" or off to disable it.

Set Length L1 And Set Length L2

Lengths for "Codabar" can be set for Any length, Length within a range, One discrete length or Two discrete lengths. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on this parameter displays a dialog box labelled Set Code Lengths where you can define the code length that will be recognized by your scanner.

Choosing One discrete length allows you to decode only those codes containing a selected length. Choosing Two discrete lengths allows you to decode only those codes containing two selected lengths. *Length within a range* allows you to decode a code type within a specified range from 5 to 55.

CLSI Editing

When enabled, this parameter strips the start and stop characters and inserts a space after the first, fifth, and tenth characters of a 14-character Codabar symbol.

Note: Symbol length does not include start and stop characters.

NOTIS Editing

When enabled, this parameter strips the start and stop characters from decoded Codabar symbol.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.2.14   MSI Plessey

Enabled

Set this parameter to *on* to enable "MSI Plessey".

Set Length L1 And Set Length L2

Lengths for "MSI Plessey" can be set for *Any length*, *Length within a range*, *One discrete length* or *Two discrete lengths*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on this parameter displays a dialog box labelled *Set Code Lengths* where you can define the code length that will be recognized by your scanner.

Choosing *One discrete length* allows you to decode only those codes containing a selected length. Choosing *Two discrete lengths* allows you to decode only those codes containing two selected lengths. *Length within a range* allows you to decode a code type within a specified range from 6 to 55.

Check Digits

Double-tapping on this parameter displays a dialog box in which you can choose One or Two check digit(s).

If this parameter is set to *One*, it is assumed that the last digit is a check digit. If "Check Digits" is set to *Two*, it is assumed that the last two digits are check digits.

Note: If Two check digits is selected, an MSI Plessey "Check Digit Algorithm: must also be selected. See below for details.

Transmit Check Digit

If this parameter is enabled, the check digit is included with the bar code data.

Check Digit Algorithm

When the *Two MSI Plessey* check digits option is selected, an additional verification is required to ensure integrity. Double-tapping on this parameter displays a dialog box n which you can choose the algorithm to be used: MOD 10/MOD 11 or MOD 10/MOD 10.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.2.15   Interleaved 2 of 5

Enabled

Set this parameter to *on* to enable "Interleaved 2 of 5".

Set Length L1 And Set Length L2

Lengths for "Interleaved 2 of 5" can be set for *Any length*, *Length within a range*, *One discrete length* or *Two discrete lengths*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on this parameter displays a dialog box labelled *Set Code Lengths* where you can define the code length that will be recognized by your scanner.

Choosing *One discrete length* allows you to decode only those codes containing a selected length. Choosing *Two discrete lengths* allows you to decode only those codes containing two selected lengths. *Length within a range* allows you to decode a code type within a specified range from 4 to 14.

Check Digit Verification

When enabled, this parameter checks the integrity of an I 2 of 5 symbol to ensure it complies with a specified algorithm – either USS (Uniform Symbology Specification) or OPCC (Optical Product Code Council).

Transmit Check Digit

If this parameter is enabled, the check digit is included with the bar code data.

Convert To EAN 13

If this parameter is enabled, the I 2 of 5 bar code is converted to EAN 13.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.2.16   Discrete 2 of 5

Enabled

Set this parameter to *on* to enable "Discrete 2 of 5".

Set Length L1 And Set Length L2

Lengths for "Discrete 2 of 5" can be set for *Any length*, *Length within a range*, *One discrete length* or *Two discrete lengths*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on this parameter displays a dialog box labelled *Set Code Lengths* where you can define the code length that will be recognized by your scanner.

Choosing *One discrete length* allows you to decode only those codes containing a selected length. Choosing *Two discrete lengths* allows you to decode only those codes containing two selected lengths. *Length within a range* allows you to decode a code type within a specified range from 1 to 12.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.2.17   RSS Code

Enable

Setting this parameter to *on* enables "2D RSS Code" scanning capability.

Enable RSS-14 (Reduced Space Symbology)

RSS-14 code can be either purely linear or split in half with one half stacked on top of the other half. Stacking the code reduces the bar code length, and providing the nominal height of the code is maintained, it can be omni-directionally scanned.

Enable RSS Limited

"RSS-Limited" is restricted, in that it can only encode 14 digit GTINs (global trade item number) that begin with either a *0* or a *1*. It is not stackable and is not designed to be read omni-directionally.

Enable RSS Expanded

"RSS Expanded" uses the same application identifiers as UCC/EAN-128 codes but it can be split into sections and stacked several rows high, reducing the length of the symbol, while increasing the capacity of data that can be stored. "RSS Expanded" code can be omni-directionally scanned.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.2.18 Composite

⚠️ *Important: **To successfully read this type of bar code, the two types of symbologies included in a composite bar code must be enabled. In addition, "Center Bar Code Only" must be disabled.***

A composite symbol includes multi-row 2D components making it compatible with linear and area CCD scanners along with linear and rastering laser scanners.

The options available for this parameter represent multi-level components of a composite symbol.

Enable CC-C And Enable CC-AB

To activate these components, set these parameters to *on*.

Enable TLC-39

This composite component integrates MicroPDF417 with the linear code. Setting this parameter to *on* enables this parameter.

D.2.19 PDF-417

Enable

Setting this parameter to *on* enables PDF-417 two dimensional (2D) coding.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.2.20   Micro PDF-417

Enable

Setting this parameter to on enables "Micro PDF-417" bar code scanning. Micro PDF-417 is a multi-row symbology that is useful for applications requiring greater area efficiency but lower data capacity than PDF-417.

Code 128 Emulation

When this parameter is enabled, the scanner transmits data from certain Micro PDF-417 symbols as if it was encoded in Code 128 symbols.

If Code 128 Emulation is enabled, the following Micro PDF-417 symbols are transmitted with one of the following prefixes:

]C1 - if the first codeword is 903-907, 912, 914, 915

]C2 - if the first codeword is 908 or 909

]C0 - if the first codeword is 910 or 911

If Code 128 Emulation is set to off, the Micro PDF-417 symbols are transmitted with one of the following prefixes:

]L3 - if the first codeword is 903-907, 912, 914, 915

]L4 - if the first codeword is 908 or 909

]L5 - if the first codeword is 910 or 911

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3 Decoded
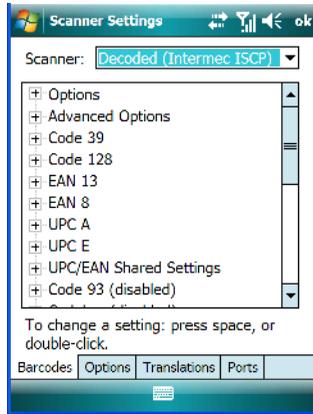
- Tap on the **Scanner** dropdown menu, and choose **Decoded (Intermec ISCP).**

D.3.1 Options – Decoded Scanner

Laser On Time

The value assigned to this parameter determines how long the laser will remain on when the scan button or trigger is pressed.

Double-tapping on this parameter displays a dialog box in which you can enter a value between 1 and 10 seconds.

D.3.2 Advanced Options – Decoded Scanner

Continuous Scan Mode

Setting this parameter to 'on' keeps the laser on and continuously decoding as long as the scanner button is pressed and held down.

Minimum Cancel Time

The value assigned to this parameter determines the time delay before the scanner is turned off, once the scanner trigger or button is released. This gives the scanner a minimum amount of time to complete its current decode before the scan is cancelled when the user quickly triggers on/off.

Low Power Timeout

To extend laser life, you can select the length of time the scanner remains active following a successful decode. The scanner wakes from low power mode when a bar code is scanned – a successful decode restores normal blinking.

When you double-tap on this parameter, a dialog box is displayed in which you can choose a value of 30 sec, 1 min, 2 min or 3 min.

Note: This parameter is only used if the Trigger Mode has been set to Continuous On and the Ikôn is mounted in a fixed position; otherwise, 'Low Power Timeout' is not used.

Parameter Scanning

Setting this parameter to Enabled allows decoding of parameter bar codes.

Same Read Validate

The data is only transmitted after repeated reads give the same result. The value assigned at this parameter determines the number of reads required, from 0 to 10 times.

Same Read Timeout

Prevents the same bar code from being read more than once. The value assigned determines after what time period the scanner will timeout, from 0 to 2550 msec.

Diff Read Timeout

Prevents unwanted reading of other bar codes on the same label. The value assigned determines after what time period the scanner will timeout, from 0 to 2550 msec.

Add AIM ID Prefix

The *AIM ID* (Association for Automatic Identification and Mobility) is an international bar code identifier. When this parameter is enabled, the *AIM ID* is inserted at the beginning of the decoded bar code.

D.3.3   Code 39

Enable

Setting this parameter to *on* enables "Code 39".

Full ASCII

If this parameter is enabled, the characters +, %, and / are used as escape characters. The combination of an escape character and the next character is converted to an equivalent ASCII character.

Reading Range

Determines the reading distance from which a bar code can be successfully scanned. The default setting, Extended, allows for increased reading distance.

Start/Stop Transmit

Setting this parameter to *on* enables the transmission of start and stop characters, which are usually not transmitted. Code 39 can start and end with either a * or a $ character (see also next parameter, "Accepted Start Char").

Accepted Start Char

This parameter allows the user the option of using one of the two start/stop characters or both ($ char, * char, $ and * char).

Check Digit Verification

Uses the specified algorithm of the option you've chosen to ensure the integrity of the symbol data before transmitting. If the data does not contain that algorithm, the data is not transmitted. The available options are: Disabled, MOD 43 Check, French CIP, or Italian CIP.

Note: French CIP (French pharmaceutical) is only used with bar codes containing 7 characters.

Italian CIP (Italian pharmaceutical) is also known as Code 32. It is transmitted as a standard Code 39 if checksum is not validated.

Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

Minimum Length

Minimum lengths for the bar code can be set from *0 to 255*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3.4   Code 128

Enable

Setting this parameter to *on* enables "Code 128".

GS1-128

"GS1-128" is the GS1 implementation of the Code 128 barcode specification. The former correct name was UCC/EAN-128.

GS1-128 Identifier

"GS1-128 Identifier" allows the AIM ID "]C1" for EAN 128 to be transmitted or removed. By default, this identifier is transmitted if EAN 128 is enabled.

GTIN Compliant

GTIN (global trade item number) processing transmits EAN 128 as the 14-character EAN/UCC GTIN. To use GTIN processing, you must activate the EAN 128 symbology.

⚠️ *Important: When EAN 128 and GTIN processing are both activated, it is not possible to read normal EAN 128 Codes.*

FNC1 Conversion

"FNC1 Conversion" allows the embedded FNC1 character to be converted to another character for applications that cannot use the default <GS> Group Separator or hex (1d).

Double-tapping on this option displays a dialog box listing the allowable range – 0 to 255.

Enable ISBT 128

To successfully scan this type of bar code (International Society of Blood Transfusion), this option must be set to *on*. If you enable this type of bar code, Code 128/EAN 128 is deactivated to avoid any confusion.

ISBT Concat Transmit

The codes are not concatenated by default. You need to choose one of the options provided for this parameter to send concatenated code. Choosing Only Concatenated Codes transmits only concatenated codes—single codes will not be transmitted. Choosing Concatenated or

Single transmits single codes or concatenated codes. If only one code of a pair is read, that code will be transmitted as a single code. If both codes in a pair are detected, they will be concatenated provided that ISBT Concat Any Pair (see below) is enabled.

ISBT Concat Any Pair

Enabling this parameter causes all code pairs that can be, to be concatenated even if they do not comply with Section 4.1 of the "ISBT 128 Bar Code Symbology and Application Specification for Labeling of Whole Blood and Blood Components" (June 2000, Version 1.2.1).

Reading Range

Determines the reading distance from which a bar code can be successfully scanned. The default setting Extended, allows for increased reading distance.

Check Digit Verification

The available options for this parameter are Disabled or French CIP. This parameter uses the specified algorithm of the option you've chosen to ensure the integrity of the symbol data before transmitting. If the data does not contain that algorithm, the data is not transmitted.

Note: French CIP (French pharmaceutical) is only used with bar codes containing 7 characters.

Minimum Length

Minimum lengths for the bar code can be set from *0 to 255*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3.5 EAN 13

Enabled

Set this parameter to *on* to enable "EAN 13".

ISBN Conversion

When this parameter (International Standard Book Number) is enabled, the first 3 characters ('978') are ignored and the checksum (0.9, 'X') is calculated on the remaining characters.

Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3.6 EAN 8

Enabled

Set this parameter to *on* to enable "EAN 8".

Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

Convert To EAN 13

If this parameter is enabled, an EAN 8 bar code is converted to EAN 13.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3.7 UPCA

Enabled

Set this parameter to *on* to enable "UPC A" bar code scanning recognition.

Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

Transmit Number System

If this parameter is enabled, the number system digit is transmitted with the decoded bar code data.

Convert To EAN 13

If this parameter is enabled, a UPC A bar code is converted to EAN 13.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3.8   UPC E

Enabled

Set this parameter to *on* to enable "UPC E".

Enable UPC-E1

Set this parameter to *on* to allow "UPC-E1" (zero suppressed) bar code scans.

Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

Transmit Number System

If this parameter is enabled, the number system digit is transmitted with the decoded bar code data.

Convert To UPC-A

This parameter converts UPC E (zero suppressed) decoded data to UPC A format before transmission. After conversion, data follows UPC A format and is affected by UPC A programming selections (e.g. Check Digit).

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3.9   UPC/EAN Shared

The setting assigned to the "Addendum" parameter associated with this option is shared across all UPC and EAN bar codes.

Addendum

An addendum is a separate bar code, supplementary to the main bar code. This parameter provides two options: *Not Required but Transmitted if Read* or *Required and Transmitted*.

•   Double-tap on **Addendum** to display a dialog box listing your options.

•   Highlight an item, and tap on **OK**.

When "Addendum" is set to *Not Required but Transmitted if Read*, the scanner searches for an addendum and if one exists, appends it to the main bar code. When the parameter is set to *Required and Transmitted*, the scanner does not accept the main bar code without an addendum.

Addendum Add-on 2 And Addendum Add-on 5

Enabling these parameters sets the length of the addendum bar code to either 2 or 5 characters.

Addendum Security

If you tap on "Addendum Security", a dialog box is displayed in which you can define the security level of add-on 2 or add-on 5 with a value from 0 to 100. As security levels increase, the scanner decode speed decreases.

GTIN Compliant

GTIN (global trade item number) processing transmits EAN 128 as the 14-character EAN/UCC GTIN. To use GTIN processing, you must activate the EAN 128 symbology.

⚠️ *Important: When EAN 128 and GTIN processing are both activated, it is not possible to read normal EAN 128 Codes.*

Reading Range

This parameter determines the reading distance from which a bar code can be successfully scanned. The default setting, *Extended*, allows for increased reading distance.

D.3.10   Code 93

Enabled

Set this parameter to *on* to enable "Code 93".

Minimum Length

Minimum lengths for the bar code can be set from *0 to 255*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3.11   Codabar

Enabled

Set this parameter to *on* to enable "Codabar".

Start/Stop Transmit

Codabar can use the following sets of characters as start and stop characters:

a, b, c, d

A, B, C, D

a, b, c, d, /, t, n, *, e

DC1, DC2, DC3, DC4

Thus, when a set is chosen, the first and last digits of a Codabar message must be one of those characters and the body of the message should not contain these characters. Setting this parameter to Not Transmitted strips the start and stop characters from this bar code.

CLSI Library System

When enabled, spaces are inserted after characters 1, 5, 10 in the 14-character label (used in the USA by libraries using the CLSI system).

Check Digit Verification

When enabled, this parameter checks the integrity of a symbol to ensure it complies with a specified algorithm – either *USS* (Uniform Symbology Specification) or *OPCC* (Optical Product Code Council).

Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

Set Length L1, Set Length L2, And Set Length L3

Lengths for "Codabar" can be set from *0 to 255*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on these parameters displays dialog boxes where you can define the code length that will be recognized by your scanner.

Length Mode

You can choose to set L1 as Minimum Length or L1,L2,L3 as Fixed Length.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3.12 MSI Plessey

Enabled

Set this parameter to *on* to enable "MSI".

Enable Plessy

Set this parameter to *on* to enable "Plessy".

Check Digit Verification

The available options for this parameter are *MOD 10 Check* and *Double MOD 10 Check*. This parameter uses the specified algorithm of the option you've chosen to ensure the integrity of the symbol data before transmitting. If the data does not contain that algorithm, the data is not transmitted.

Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

Plessy Transmit Check Digit

If the check digit is to be transmitted with the Plessy data, this parameter must be enabled.

Minimum Length

Minimum lengths for the bar code can be set from *0 to 255*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Plessy Minimum Length

Minimum lengths for the Plessy bar code can be set from *0 to 255*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3.13   Code 11

Enabled

Set this parameter to *on* to enable "Code 11".

Check Digit Verification

The available options for this parameter are *MOD 10 Check* and *Double MOD 10 Check.*This parameter uses the specified algorithm of the option you've chosen to ensure the integrity of the symbol data before transmitting. If the data does not contain that algorithm, the data is not transmitted.

Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

Minimum Length

Minimum lengths for the bar code can be set from *0 to 255*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3.14   Interleaved 2 of 5

Enabled

Set this parameter to *on* to enable "Interleaved 2 of 5".

Reading Range

This parameter determines the reading distance from which a bar code can be successfully scanned. The default setting, Extended, allows for increased reading distance.

Check Digit Verification

The available options for this parameter are *Disabled, MOD 10 Check* and *French CIP*. "Check Digit Verification" uses the specified algorithm of the option you've chosen to ensure the integrity of the symbol data before transmitting. If the data does not contain that algorithm, the data is not transmitted.

Note: French CIP (French pharmaceutical) is only used with bar codes containing 7 characters.

Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

Set Length L1, Set Length L2, And Set Length L3

Lengths for "Interleaved 2 of 5" can be set from *0 to 255*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on these parameters displays dialog boxes where you can define the code length that will be recognized by your scanner.

Length Mode

You can chose to set L1 as Minimum Length or L1,L2,L3 as Fixed Length.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3.15 Matrix 2 of 5

Enabled

Set this parameter to *on* to enable "Matrix 2 of 5".

Minimum Length

Minimum lengths for the bar code can be set from *0 to 255*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page 9 for details.

D.3.16   Discrete 2 of 5

Enabled

Set this parameter to *on* to enable "Discrete 2 of 5".

Standard 2 of 5 Format

This parameter allows you to choose a standard format – either *Identic on (6 start/stop bars) or Computer Identics (4 start/stop bars)*.

Check Digit Verification

The available options for this parameter are *Disabled* and *MOD 10 Check*. "Check Digit Verification" uses the specified algorithm of the option you've chosen to ensure the integrity of the symbol data before transmitting. If the data does not contain that algorithm, the data is not transmitted.

Transmit Check Digit

If the check digit is to be transmitted with the data, this parameter must be enabled.

Set Length L1, Set Length L2, And Set Length L3

Lengths for "Discrete 2 of 5" can be set from *0 to 255*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Double-tapping on these parameters displays dialog boxes where you can define the code length that will be recognized by your scanner.

Length Mode

You can chose to set *L1 as Minimum Length or L1,L2,L3 as Fixed Length*.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3.17   Telepen

Enabled

Set this parameter to *on* to enable "Telepen".

Format

This parameter allows you to set the bar code character format to either *ASCII or Numeric*.

Minimum Length

Minimum lengths for the bar code can be set from *0 to 255*. The length of a code refers to the number of characters (i.e., human readable characters), including check digit(s).

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3.18   RSS Code (Reduced Space Symbology)

Enable

Setting this parameter to *on* enables "RSS Code" scanning capability.

Enable RSS-14

RSS-14 code can be either purely linear or split in half with one half stacked on top of the other half. Stacking the code reduces the bar code length, and providing the nominal height of the code is maintained, it can be omni-directionally scanned.

Enable RSS Limited

"RSS-Limited" is restricted, in that it can only encode 14 digit GTINs (global trade item number) that begin with either a 0 or a 1. It is not stackable and is not designed to be read omni-directionally.

Enable RSS Expanded

"RSS Expanded" uses the same application identifiers as UCC/EAN-128 codes but they can be split into sections and stacked several rows high, reducing the length of the symbol, while increasing the capacity of data that can be stored. "RSS Expanded" code can be omni-direc-tionally scanned.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3.19   Composite

⚠️ *Important:* ***To successfully read this type of bar code, the two types of symbologies included in a composite bar code must be enabled. In addition, "Center Bar Code Only" must be disabled.***

A composite symbol includes multi-row 2D components making it compatible with linear and area CCD scanners along with linear and rastering laser scanners.

The options available for this parameter represent multi-level components of a composite symbol.

Enable CC-C And Enable CC-AB

To activate these components, set these parameters to *on*.

Linear Transmission Only

When 'Linear Transmission Only' is enabled, only the linear code portion of the composite bar code is transmitted when scanned.

UPC-EAN Composite Message

This option allows you to choose how UPC-EAN shared bar codes are transmitted: *Always Linked*, *Never Linked* or *Auto-discriminate*.

D.3.20   TLC-39

Enable

This composite component integrates MicroPDF417 with the linear Code 39 symbol. Setting this parameter to *on* enables this parameter.

Linear Transmission Only

When "Linear Transmission Only" is enabled, only the linear portion of the composite bar code is transmitted when scanned.

Security Level

This parameter is used to differentiate between TLC-39 and standard Code 39. Tapping on "Security Level" displays a dialog box in which you can assign a value from 0 to 100. The higher the value assigned, the lower the decode rate.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3.21   PDF-417

Enabled

Set this parameter to *on* to enable "PDF-417".

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3.22   Micro PDF-417

Enabled

Set this parameter to *on* to enable "Micro PDF-417".

Code 128 Emulation

When this parameter is enabled, the scanner transmits data from certain Micro PDF-417 symbols as if it was encoded in Code 128 symbols.

If Code 128 Emulation is enabled, the following Micro PDF-417 symbols are transmitted with one of the following prefixes:

]C1 - if the first codeword is 903-907, 912, 914, 915

]C2 - if the first codeword is 908 or 909

]C0 - if the first codeword is 910 or 911

If Code 128 Emulation is set to off, the Micro PDF-417 symbols are transmitted with one of the following prefixes:

]L3 - if the first codeword is 903-907, 912, 914, 915

]L4 - if the first codeword is 908 or 909

]L5 - if the first codeword is 910 or 911

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.3.23   Codablock

Enable Codablock A

Set this parameter to *on* to enable "Codablock type A".

Enable Codablock F

Set this parameter to *on* to enable "Codablock type F".

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.4   Imager
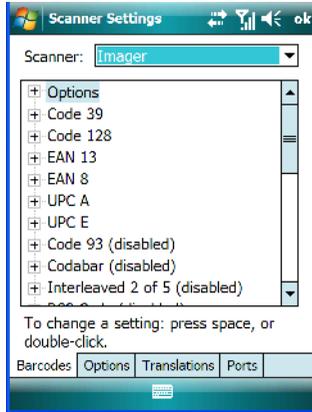
- Tap on the **Scanner** dropdown menu, and choose **Imager**.

D.4.1   Options – Imager

Center Barcode Only

Note: This parameter must be disabled when reading Composite bar codes.

When more than one bar code is visible in a single snap shot, this parameter allows you to specify that only the centre image within the imager framing marker be read. When this parameter is set to *on*, the target dot is pointed at the centre image and only that image is returned.

Max Number Barcodes

This parameter specifies the maximum number of bar codes the imager will attempt to decode in an image. A maximum of 6 bar codes can be decoded at one time.

Barcodes Must Decode

This parameter specifies the minimum number of bar codes that the imager must decode in order to report success.

Note: This number must be less than the number of bar codes assigned to "Max Number Barcodes". The driver validates and reassigns the value if necessary.

D.4.2   Code 39 Settings

Enabled

Set this parameter to *on* to enable "Code 39".

Full ASCII

If this parameter is enabled, the characters +, %, and / are used as escape characters. The combination of an escape character and the next character is converted to an equivalent ASCII character.

Check Digit Verification

When this parameter is enabled (set to *on*), the integrity of a "Code 39" symbol is checked to ensure that it complies with specified algorithms.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.4.3   Code 128 Settings

Enabled

Set this parameter to *on* to enable "Code 128".

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.4.4   EAN 13

Enabled

Set this parameter to *on* to enable "EAN 13".

Addendum

An addendum is a separate bar code, supplementary to the main bar code. This parameter provides three options: Disabled, Optional and Required. Depending on the value chosen for this parameter, an addendum is recognized or ignored.

• Double-tap on **Addendum** to display a dialog box listing your options.

• Highlight an item, and tap on **OK**.

When "Addendum" is set to *Disabled*, the scanner does not recognize an addendum. If this parameter is set to *Optional*, the scanner searches for an addendum and if one exists, appends it to the main bar code. When the parameter is set to *Required*, the scanner does not accept the main bar code without an addendum.

Note: Setting "Addendum" to 'Optional' reduces performance. It should only be chosen if at least some of the bar codes being read have addendums.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.4.5 EAN 8

Enabled

Set this parameter to *on* to enable "EAN 8".

Addendum

Refer to "Addendum" on page D-26.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.4.6 UPC A

Enabled

Set this parameter to *on* to enable "UPC A".

Addendum

Refer to "Addendum" on page D-26.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.4.7 UPC E

Enabled

Set this parameter to *on* to enable "UPC E".

Addendum

Refer to "Addendum" on page D-26.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.4.8 Code 93

Enabled

Set this parameter to *on* to enable "Code 93".

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.4.9 Codabar

Enabled

Set this parameter to *on* to enable "Codabar".

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.4.10 Interleaved 2 of 5

Enabled

Set this parameter to *on* to enable "Interleaved 2 of 5".

Check Digit Verification

When enabled, this parameter checks the integrity of an I 2 of 5 symbol to ensure it complies with a specified algorithm – either USS (Uniform Symbology Specification) or OPCC (Optical Product Code Council).

Include Check

If this parameter is enabled, the check digit is transmitted along with the I 2 of 5 symbol.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.4.11 RSS Code (Reduced Space Symbology)

Enable

Setting this parameter to *on* enables "RSS Code" scanning capability.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.4.12 Composite

> ⚠ *Important: **To successfully read this type of bar code, the two types of symbologies included in a composite bar code must be enabled.***

Enabled

Set this parameter to *on* to enable "Composite" bar codes.

D.4.13 PDF-417

Enable

Setting this parameter to on enables PDF-417 two dimensional (2D) coding.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.4.14   Micro PDF-417

Enable

Setting this parameter to *on* enables "Micro PDF-417" bar code scanning. Micro PDF-417 is a multi-row symbology that is useful for applications requiring greater area efficiency but lower data capacity than PDF-417.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.4.15   2D Data Matrix

Enable

Set this parameter to *on* to enable "Data Matrix".

Inverse Video Mode

Enabling this parameter allows the imager to read inverse bar codes – white symbols presented on a black background.

Rectangular

Enabling this parameter allows the imager to recognize rectangular (as opposed to square) symbols.

Small Physical Size

Set to *on* by default, this parameter is used to detect small sized or small featured 2D data matrix symbologies. Turning this option *off* may decrease response time only if there is a great deal of "clutter" (i.e., pictures) in the image. However because these images are normally clean (the labels contain only text and bar codes along with a significant amount of white space), response time is usually *not* improved by turning this parameter off.

Length Restriction

Refer to "Length Restriction" on page D-8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page D-9 for details.

D.4.16   2D QR Code

Enabled

Set this parameter to *on* to enable "2D QR Code".

Field Size

Refer to "Field Size" on page D-8 for details.

D.4.17   2D Maxicode

Enabled

Set this parameter to *on* to read "2D Maxicode" images.

Length Restriction

Refer to "Length Restriction" on page 8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page 9 for details.

D.4.18   2D Aztec

Enabled

Set this parameter to *on* to read "Aztec" symbologies.

Length Restriction

Refer to "Length Restriction" on page 8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page 9 for details.

D.4.19   Postal: PlaNET

Enabled

Set this parameter to *on* to enable "Postal: PlaNET".

Length Restriction

Refer to "Length Restriction" on page 8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page 9 for details.

D.4.20   Postal: PostNET

Enabled

Set this parameter to *on* to enable "Postal: PostNET".

Length Restriction

Refer to "Length Restriction" on page 8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page 9 for details.

D.4.21   Postal: Australian

Enabled

Set this parameter to *on* to enable "Postal: Australian".

Length Restriction

Refer to "Length Restriction" on page 8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page 9 for details.

D.4.22   Postal: Japanese

Enabled

Set this parameter to *on* to enable "Postal: Japanese".

Length Restriction

Refer to "Length Restriction" on page 8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page 9 for details.

D.4.23 Postal: Korean

Enabled

Set this parameter to *on* to enable "Postal: Korean".

Length Restriction

Refer to "Length Restriction" on page 8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page 9 for details.

D.4.24 Postal: Royal

Enabled

Set this parameter to *on* to enable "Postal: Royal".

Length Restriction

Refer to "Length Restriction" on page 8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page 9 for details.

D.4.25 Postal: Kix

Enabled

Set this parameter to *on* to enable "Postal: Kix".

Length Restriction

Refer to "Length Restriction" on page 8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page 9 for details.

D.4.26   Postal: Canadian

Enabled

Set this parameter to *on* to enable "Postal: Canadian".

Length Restriction

Refer to "Length Restriction" on page 8 for details.

Add/Remove Data

Refer to "Add/Remove Data" on page 9 for details.

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